Southern Academic Review

Southern Academic Review

A Student Journal of Scholarship

Volume Sixty-Five, Number Eleven

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Einstein's Legacy: Relative "Time Present" in T.S. Eliot's "Burnt Norton"

by Benjamin Bolton

"The essential advantage for a poet is not to have a beautiful world with which to deal: it is to be able to see beneath both beauty and ugliness; to see the boredom, and the horror, and the glory."
-T. S. Eliot

In the development of relativity theory in the early twentieth century, Einstein called all known physics into question. As a result, relativity began to permeate all corners of civilization; we see everything from Eliot and Virginia Woolfe to episodes in our daily lives as relative. We are now trapped between what our common sense supports through classical metaphysics and what Einstein (and later Heisenberg) found to be true. From this entrapment, we see writers like T. S. Eliot wrestle with this situation in their poetry and criticism. To fully understand the depth of this conflict in Eliot, we must first grasp that which defies common sense—Einstein's Theory of Relativity. Only then can we begin to understand the images key to viewing "Burnt Norton" as a poem influenced by Einstein's theories.

When I first encountered Eliot's work "Burnt Norton," I wrote phrases such as "Newtonian physics," "relativity," and "Unmoved Mover" throughout my reading of the poem. To understand why, we need an even deeper understanding of the evolution of physics (and some metaphysics). From the ancient Greeks, we inherited Aristotle's notion that the motionless center "provided the reference point of absolute rest against which all other motions could be measured" (Lightman 152). Hence, the concept of the Unmoved Mover emerged into metaphysics. Aristotle located the "origin of motion outside the revolving wheel of flux"—a notion we later see in "Burnt Norton" (Bay-Petersen 148). Thus, from Aristotle we retained the theory of a Prime Mover—the origin of all motion, the absolute rest of the universe.

Newton expanded on these and other contemporary theories of motion in developing his theory of gravity and laws of motion. Both theories are largely derived from

empirical knowledge; according to Newton, space and time are absolute quantities (Shlain 120). From these absolutes, we see the laws of classical physics supporting our everyday experience of time as linear progression. Newton and Euclid both supported theories of absolutes on which all other physical systems are based. However, in the late eighteenth century, German philosopher Immanuel Kant described time and space not as absolutes. Instead, Kant "upheld that Euclidean geometry and Newtonian mechanics provide the necessary *relations* through which the intellect orders the [universe]" (his italics, Schwartz 14). Kant transformed the notion of Newtonian and Euclidean absolutes into relative absolutes.

From this modernistic interpretation of Newtonian physics, we require a reference frame for studying the absolutes Newton refers to in his works. However, during the 1920s, Newtonian physics, which still holds true for common experience, "lost [its] unquestioned authority"; no longer did this theory stand as law in the realm of the cosmic and the molecular (Schwartz 17). Instead, Newton's theories became the basis for Einstein's own theories. For instance, in classical mechanics, the principle of relativity asserts that "no mechanical experiment of any kind can reveal the motion of an observer" (Lightman 113). In other words, an observer must "measure his motion only relative to another observer/object; hence, absolute speed does not exist" (113). From Kant's interpretation of Newton and from Newton's limited application of relativity to classical mechanics, scientists extended relativity to a set of experiments with electromagnetic waves which found that the results of the experiment "depend only on the relative motion of the parts of the experiment, not on the absolute motion of any single part by itself" (114). In other words, like classical mechanics, electromagnetic phenomena must be described with the frame of reference in mind; no single part (electricity nor magnetism) has absolute properties.

Once we understand these evidences of relativism in existing theory, then, as Einstein did, we can conclude the following: "If neither electromagnetic phenomena nor mechanical phenomena determine a state of absolute rest, then such a state does not exist" (Lightman 124). This simple step in logic took centuries to evolve. Einstein concluded that no state of absolute rest exists in the universe. Through this thought process, he disproved Newton's theory of absolute time and absolute space. As a result, Einstein revolutionized the way we configure ourselves in reality. Before we examine the effects of relativity theory, we must first examine the two postulates of relativity theory.

The First Postulate

In his 1916 paper on the General Theory of Relativity, Einstein asserted the following as his first postulate: *The laws of physics must be of such a nature that they apply to systems in any kind of motion* (my italics, Jones 159). Einstein, in a thought experiment, found that if relativity applies to classical mechanics and electromagnetic phenomena, then relativity must hold true for all systems describing any motion. In the *Great Ideas of Physics*, Alan Lightman,

a physicist at the Harvard-Smithsonian Astrophysical Observatory, rephrases the first postulate as "all observers moving at a constant speed will witness identical laws of physics" (124). For civilization, Lightman's statement explains why Newtonian physics are still relevant as long as we use the constant speed of the earth as our reference frame. For example, if we are riding in a car and I toss a ball in the air, we only detect the motion of the ball. However, until we look outside the window of the car for a reference point such as a tree, we do not realize that we are moving because our speed remains constant. When the car is parked or *at rest*, it is at the same constant speed as the earth and, therefore, does not appear to be moving. However, relative to the sun, the car is moving at speed of the earth. The relationship becomes true for the earth itself. Since the earth is moving at a constant velocity, we do not detect the motion of the earth until we have a point of reference such as the sun's relative movement through the sky. Theoretically, this process of reference points continues *ad infinitum*; as a result, there is no absolute rest—only rest relative to a reference point.

When the first postulate was applied to time, Einstein found that "time does not flow at an absolute rate [speed], as it seems, but depends on the motion of the clock or the observer" (Lightman 2). The example of a *muon*, a subatomic particle found in the Earth's upper atmosphere, confirms experimentally Einstein's theory that time could slow down or dilate. On the surface of the Earth, the muon has a *resting* half-life of 2.2×10^{-6} seconds. Cosmic rays bombard these particles and send them flying

towards the earth but, according to their half-life, they should never reach the Earth's surface. Yet, they do reach the earth in relatively large, measurable amounts thereby proving they move slower in time relative to the earth's motion (Serway 1162).

To understand why time slows for the muon requires further explanation. If we could synchronize perfectly two clocks— one on earth and one on the muon, then we would see the amount of time passed on the muon's clock to be less than the clock on earth. In effect, the muon has experienced less time than its lifespan to reach the earth, but checking the clock on the earth's surface would reveal that an unreasonable amount of time had passed; the muon, by the earth's clock, should have broken-down already. Effectively, time slowed for the muon. From our common everyday experience, this idea is nonsensical, but as Lightman stated, "Relativity theory shows that our instincts about nature may sometime be wrong" (2). For instance, Walter Creed in his essay "Is Einstein's Work Relative to the Study of Literature?" argues that "Induction from experience will not yield the secrets of nature [any more] because physics has advanced beyond the explanation of surface phenomena to the abstract laws which lie beneath them" (207).

The Second Postulate

This counterintuitive nature of relativity becomes more complex when considering Einstein's second postulate: "The speed of light is the same as measured by all observers, independent of their own speed of motion" (Lightman 125). Even though we just

learned that observers at different constant speeds observe differing laws of physics, Einstein postulates that any observer of the speed of light, denoted by the letter c, always would measure c at 299 794 kilometers per second. Consider the following example: to measure the speed of light emitted by the lights on a plane in accordance with Newtonian mechanics and common experience, I would expect the measured speed of light to equal the speed of light *plus* the speed of the plane. However, if an observer in the plane and I were both to measure the speed of the light emanating from the plane, we would obtain the same result — c (125).

This result, in theory, also should hold true for any object/matter traveling up to 99.9999% of the speed of light. Using common sense, we deduce that speeds combine, but these speeds are all minute compared to the speed of light. For instance, if I throw a ball on a plane, the ball, to an observer on the ground, appears to be going the speed of the plane *plus* the speed of the ball. As the speed of a ball approaches light speed, the discrepancy between the combined speed of the ball on the plane and the true speed of the ball is greater (Lightman 127-9). Einstein referred to this difference as the *time dilation factor* (142). Because the daily effects of relativity are infinitesimal for everyday speeds, "we think that simultaneity is absolute," states Alan Lightman (132). Nevertheless, in relativity, absolute time is non-existent.

From Einstein to Eliot

By destroying society's surety in the absolute nature of time, Einstein unknowingly decentered our security in the meaning and structure of our known universe. Painting, sculpture, and architecture all became decentered and distorted. Movements such as Cubism, Fauvism, and futurism emerged with obvious influences from relativity. For instance, Marcel Duchamp's *Nude Descending a Staircase, No. 2* inspires the following comment from Leonard Shlain in *Art and Physics*: "Behind the dizzying chaotic motion on Duchamp's canvas, however, lay the idea of stillness, contained within the concept of the simultaneity of time at c" (his italics, 210). Meanwhile, works of literature began to gain meaning only when considered to be relative to other works, historical events, the reader, or its cultural milieu (Craige 118). In Eliot's lecture series *The Use of Poetry and the Use of Criticism*, he said, "It has been my view throughout . . . that the development and change of poetry and of all the criticism of it is due to elements [such as relativity] which enter from outside" (119).

In this climate of new scientific theory, Eliot composed "Burnt Norton" and placed it as the last work in his *Collected Poems, 1909-1935*. Eliot says he wrote the poem because he took a break from play writing during the war (Litz 180). In 1930, five years prior to writing "Burnt Norton," Eliot translated Charles Mauron's essay "On Reading Einstein" which discusses the philosophical ramifications of relativity, specifically that simultaneity depends on the observer (Bay-Petersen 154). In Denis Donoghue's explication of "Burnt Norton," he asserts, "The fundamental motive of 'Burnt Norton' is to void the claim of spontaneity" (13). Although I would not fully

agree with Donoghue's analysis of the poem's motive as absolute, he does recognize a recurrent theme in the poem—the denial of spontaneity. Throughout Eliot's poem "Burnt Norton," references to relativity theory's notions of space, time, and light permeate through the images presented—the rose garden, the axel-tree, silence and the unheard melody. In essence, the poem becomes Eliot's own private thought experiment on relativity theory.

The poem's verse opens with: "Time present and time past/ Are both perhaps present in time future,/ and time future contained in time past" (Eliot, *Four Quartets* l. 1-3). Critics commonly attribute several meanings for these lines. Some even offer sympathy for the first-time reader (Donoghue 3). Hauptman and Hauptman describe the opening lines as a "mirror of the confusion of time in modern fiction. . . .Time is manipulated into asymmetrical, simultaneous, and reversible patterns. Everything is everywhere" (126). Even though these lines confuse readers at first, time present, time past, and time future all become "eternally present" in the next line (l. 4-5). This eternal present coincides with Einstein's thoughts about traveling near the speed of light. He believed that near the speed of light, all form, the past, and the future would simply yield into present or the eternal now. All time, for Einstein, is part of the spacetime continuum which curves into itself due to gravity (Hawking 40). Hence, all time is present now or "everything is everywhere" (Hauptman and Hauptman 126).

From the premise that time is eternally present, Eliot writes, "All time is unredeem-able" (l. 5). Ole Bay-Peterson wrote, "If all time is simultaneous, it is also unredeemable since we cannot redeem what is always present" (144). For Eliot, simultaneity *is* the "eternal present." Our common sense defines the present as all events occurring at the same time or simultaneously. However, for Einstein, the entire universe is occurring at the same time, one time—the spacetime continuum. Eliot embeds this concept in the lines: "What might have been and what has been/ Point to one end, which is always present" (l. 9-10). Thus, no time is redeemable since all time (past, present and future) exists within the whole body of the spacetime continuum. Demarcations of past, present and future allow our minds to categorize what is happening in our snapshot of spacetime. According to Eliot and Einstein, to know the entirety of the spacetime continuum is to be God.

The Rose Garden

From this opening passage of eternal present, Eliot delves into the realms of speculation and a different light cone by mentioning the rose-garden. A *light cone* is Einstein's way to describe what we refer to as the past, present, and future. Together the past and future cones form an hour-glass shape, the light cone, with the present as the vertex of the two cones meeting (Hawking 36). Reality, as we know it, exists in one of these light cones. History is humankind's experience of another light cone. In the rose-garden, Eliot seems to hint at a differing reality either within time or possibly even outside of time (Bay-Petersen 145). The rose garden itself suggests a place historically significant to ei-

ther Eliot or the narrator.

Regardless of the reason, the speaker in the poem seems to experience a differing reality in the rose-garden. Edward Lobb believes that the "timeless intersection in the rose-garden" relieves Eliot's "emotional resignation" from loving Emily Hale, an inhabitant of the Burnt Norton estate in Glouchester (59). The importance of Lobb's observation lies in his acknowledgment of a timeless intersection in the rose-garden. This intersection is the apex of the garden's light cone, a present unknowable to us in the present of the poem. Thus, Eliot uses the rose garden to create a reference frame unknown to the poem's readers. Staffan Bergsten argues that the "experience in the rose-garden may also be interpreted as a vision of eternity" (172).

The lines after the rose-garden create another intersection, one between the poem and its reader: "My words echo/ Thus, in your mind" (l. 14-15). Eliot's use of the second-person pronoun *your* in the phrase pulls the reader into the text itself. Hence, the relationship between the reader and the poem becomes the meaning. In her book *Literary Relativity*, Betty Jean Craige writes, "In a world without center, nothing has meaning, including the self, except in relation to everything else" (62). Similarly, the nature of Einstein's legacy to us is a world without a center and a world where meaning derives solely from relationships. In Einstein's theories, we see how meaning is obtained through the interrelations of objects and their frame of reference. The relativity of the text and the poem thus become part of the spacetime continuum. We see the reader, the author, and the poem all existing simultaneously in spacetime yet separately in our common sense, everyday reality.

The Unheard Music

From our common sense, we empirically derive physical laws similar to Newtonian physics, but Eliot seems to recognize the deception of these laws in following lines:

> shall we follow
> the deception of the thrush? Into our
> first world.
> There they were, dignified, invisible,
> Moving without pressure, over the
> dead leaves,
> In the autumn heat, through the vi-
> brant air,
> And the bird called, in response to
> The unheard music hidden in the
> shrubbery,
> And the unseen eyebeam crossed.
> (l. 21-7)

The crux of this passage lies in the "unheard music." This phrase reflects Eliot's study of John Keats' work, for Keats made a "distinction between heard melodies and those unheard; unheard music is absolute. [It is] the essence of sound as distinct from its sensible existence" (Donoghue 6). As Claude DeBussy said, "Music lies in the notes between the notes."

For relativity, the essence of time lies in the timeless concept of the spacetime continuum—the eternal present. The "unseen eyebeam" is the absolute speed of light, for the speed of light is an unseen concept describing light, an "eyebeam." Similarly, the soul is a concept describing the essence of man yet in itself timeless. Thus, the essence of an object in time is its unseen, unheard

pattern that lies outside of time. D. W. Harding in his 1936 review of "Burnt Norton" wrote, "This poem is a newly created concept [or music], equally abstract but vastly more exact and rich in meaning" (109). Through this imagery, the poem creates the unseen, unheard melody of relativity—a notion lying outside of time yet describing time.

Soon after Eliot reveals this pattern of unheard music, he writes of the lotus and the heart of light: "And the lotus rose, quietly, quietly/ The surface glittered out of a heart of light" (l. 36-37). The phrase "heart of light" suggests Joseph Conrad's novella *Heart of Darkness*, a favorite of Eliot's. Bergsten contends that the title "stands for the depth of despair and spiritual darkness and its inversion thus [Eliot is] suggesting its opposite—divine illumination" (171). Similarly, the lotus is typically associated with the Buddhist belief in enlightenment, the ultimate state of being that is devoid of pain and suffering. In referring to these lines, Denis Donoghue argues, "Nothing matters more because the disjunction between existence and essence renders existence appalling unless we live in the demanding light of eternity" (7). Together the images of the heart of light and the lotus represent the illumination that results once any relationship is understood.

However, at this point, we learn that "human kind/ cannot bear very much of reality" (l. 42-43). For Betty Jean Craige, "The sensibility which understands that the universe lacks a center but which nonetheless desires a center, creates *The Waste Land*, a vision of horror where the absence of God leaves the world in fragments" (87). Hu-

mankind is fragmented by the notion of relativity. Where Eliot seems trapped in the fragmentary world of *The Waste Land*, he "implies in the 'Four Quartets' . . . that humanity needs other truths, religious and artistic, which reach beyond the limit of science" (Friedman and Donley 81). Hence, at the end of part one of "Burnt Norton," we realize that relativity leaves us wanting a center but denies us of that center.

The Axel-Tree

In part two of "Burnt Norton," Eliot explores the center as the "still point of the universe" and seemingly concludes that at the center is light. The beginning of this section eludes most critics; typically, they either give an origin for the lines and move on or they simply do not address the lines. To begin the part two, Eliot writes, "Garlic and sapphires in the mud/ Clot the bedded axle-tree" (l. 47-48). The lines relate to the belief in a clotted still point. An *axle-tree* is "(1) the fixed bar on the rounded ends of which the opposite wheels of a carriage revolve . . . or (4) the imaginary line which forms the axis of revolution of any body" (OED). Thus, the axle-tree exists as Aristotle's Unmoved Mover, the "still point of the turning world" that is clogged by vegetation (garlic) and the sky (sapphires).

The next thirteen lines (l. 48-61) take the reader through a series of moving images. From "singing below inveterate scars" to the "drift of stars," from "ascend[ing] to summer in the tree" to "hear[ing] upon the sodden floor/ Below," we feel the wave-like effects of moving up and down. The lines are reminiscent of the translation of the Greek epitaph at the poem's opening:

"The way up and the way down are one in the same" (Brooker 91). In essence, Heraclitus, author of the epitaph, discovered that all things must be described as relative to one another and that no state of absolute rest exists (Cahill 139). As a result of this motion, "the boarhound and the boar/ Pursue their pattern as before/ But reconciled among the stars" (l. 59-61). The confusion of ascension and descent resolve in the stars as the spacetime continuum.

Upon reconciliation of the boar and boarhound, Eliot switches from the opening verse of part two to prose: "At the still point of the turning world . . ./ There would be no dance, and there is only the dance" (l. 62, 67). The still point invokes allusions to Aristotle's concept of the Unmoved Mover and St. Thomas Aquinas's *Summa Theologica* which concludes that "there is something [God] truest and best and noblest" (243). The still point is the axel-tree's (and universe's) hypothetical center that does not rotate or "dance." However, Eliot seems to deny the deduction of Aristotle and Aquinas by presenting a catalog of what the still point is *not*: flesh nor fleshless, from nor toward, arrest nor movement, ascent nor decline (l. 62-66). From these images, we see that the still point, paradoxically moving yet at rest, is similar to the water of a river—always flowing yet always present. As Brooker writes, Eliot's "focus changes from reconstructing a shared reference point to glimpsing a universal pattern" such as Keats' unheard melody (89). Likewise, Einstein proved that absolute rest and absolute speed do not exist and offered the spacetime continuum as the new still point—always present yet we experience it as always flowing.

Furthermore, Einstein postulated that the only absolute is the speed of light, which Eliot describes as "where past and future are gathered" (l. 65). Once we comprehend this necessity of relativity, we then can understand light as the still point in a river or as the axel-tree's center: "By a grace of sense, a white light still and moving" (l. 73). According to relativity theory, as we approach the speed of light, we reach a point where "front, back, and side are all squeezed into an infinitely flat, two-dimensional, vertical plane (Shlain 131). At this point, only white light exists; only the present exists. Past and future are no longer relevant at the speed of light. Only "one motionless *everlasting now*" exists (his italics, 132).

This light becomes "concentration without elimination" and can be understood in "the resolution of its partial horror" (l. 74-78). The "partial horror" refers to the loss of the center, the unmoved mover, and the axle-tree, but the resolution of this horror will take one out of the "enchainment of past and future" into consciousness. This sentiment echoes the Hindu and Buddhist quest for enlightenment, the release from the Wheel of Life and "from action and suffering" (l. 71). However, as Bay-Petersen states, "In the *Quartets*, Eliot stresses the need to accept the temporal sphere while cultivating a sense of detachment from it" (147). For Eliot, "to be conscious is not to be in time" (l. 85) especially when we consider the escape from the commonsense enchainment of past and future as the goal to understanding relativity theory. The paradox of this consciousness is as follows: only in time can we remember this revela-

tion, a revelation the speaker seems to have had in the rose-garden. Thus, the second part of "Burnt Norton" concludes with: "Only through time, time is conquored" (l. 90).

Silence at c

In part three, Eliot discusses the "lucid stillness" found after the "cleansing affection from the temporal" (l. 93, 98). Once light speed is reached, only light and silence remains. No sound would be possible since the speed of light is much greater than the speed of sound.

P. W. Bridgman, the 1950 winner of the Nobel prize for physics, noted that Einstein's theory leaves the universe void of meaning: "It is literally true that the only way of reacting to this [theory] is to shut up" (qtd. in Hauptman and Hauptman 130). This emptiness sends our speaker lower and lower into solitude. Here, we see the immediate result of understanding the concept of the spacetime continuum—solitude. The speaker longs for the moment in the rose garden when he is standing outside time in consciousness. The inability to return to this enlightened state immediately sends the speaker into deep depression especially since the world continues to have its appetite for its old ways of time future and time past.

Thus, upon understanding relativity, we become silent and the general populace remains "empty of meaning/ Tumid apathy with no concentration" (l. 102-3). The world remains in its old "metalled ways/ Of time past and time future" due to daily experience, for temporal differences explained by relativity are "only a flicker/ Over the strained time-ridden faces/ Distracted from distraction by distraction" (l. 99-101, 124-26). In other words, the constant rotation of the earth—a "slow rotation suggesting permanence" (l. 95)— prevents us from experiencing relativity theory. As a result, we normally travel through the day without any hint that Newton's laws of physics are not absolute.

Black Clouds, Black Holes

Part four of "Burnt Norton" is a return to the light speed discussed in part two. Eliot seems to wonder if we are light: "Will the sunflower turn to us, will the clematis?/ Stray down, bend to us; tendril and spray/ Clutch and cling?/ Chill/ Fingers of yew be curled/ Down on us ?" (l. 129-34). Indeed, Eliot asks if nature's flora will turn to us as it does to light or will it simply shade us from the true light. Unlike the deception of the thrush in part two, the kingfisher holds the key to understanding: "After the kingfisher's wing/ Has answered light to light, and its silent, the light is still/ At the still point of the turning world" (l. 134-136). Here, we see the kingfisher, not humankind, understanding the still point of the universe; light answers with light.

Rajendra Verma describes this point as "the point of melting of future into the past. Time . . . has crawled in with the 'black cloud carrying the sun away'" (44). Einstein theorized that a similar effect occurs at black holes, which Stephen Hawking defines as "a region of spacetime from which nothing, not even light, can escape, because gravity is so strong" (240). A black hole's light cone "acts rather like a one-way membrane around the black hole . . . . Nothing

can ever get out of the black hole through [its light cone]" (116). Light never escapes the blackness to experience the future of its light cone; light is consumed by the gravitational force of the black hole. For Eliot, only light remains still at the still point of the universe.

The perpetual motion of stillness

In the final section of "Burnt Norton," Eliot culminates the images and patterns of the previous sections. From part one, we see the differing reality of the rose garden while in part two we hear the unheard melody and see a clotted axel-tree. From part three, we learn that sound ceases to exist and solitude prevails. In the forth part, black clouds engulf the light we desire.

Eliot opens part five with "Words move, music moves/ Only in time" (l. 137-8). Sound waves are unseen patterns or vibrations of air that are described in a snapshot, a timeless moment, and yet waves describe movement through time. In other words, to describe an event happening over time, we must describe it as timeless. Eliot writes, "Only by the form, the pattern,/ Can words or music reach/ The stillness" (l. 139-41). As described in the first part, essence exists outside of time. The pattern of a melody exists unheard, outside of time. For relativity, the essence of time lies in the timeless concept of the spacetime continuum — the eternal present.

This present becomes the "stillness as a Chinese jar still/ Moves perpetually in its stillness" (l. 142-3). The Chinese jar stands in opposition to the axel-tree that is constantly moving yet still as Aristotle's Unmoved Mover. The jar also symbolizes the

pattern formed by words and music; hence, Eliot seems to recognize that in art, time may appear as space (Bay-Petersen 153). For instance, Marcel Duchamp seems to capture a composite picture of spacetime in his painting *Nude Descending a Staircase, No. 2*. Eliot suggests this painting itself in the following lines: "The detail of the pattern is movement,/ As in the figure of the ten stairs" (l. 159-60).

After describing the paradox of moving perpetually in stillness, Eliot summarizes the basics of relativity theory in four lines:

"Or say that the end precedes the beginning,
And the end and the beginning were always there
Before the beginning and after the end.
And all is always now." (l. 146-150)

These lines embrace the essentials of relativity theory. The beginning (past) and end (future) both already exist in spacetime. According to relativity, "all is always now" at the speed of light. Just as relativity theory remains hidden to us because of common sense experience, so "rises the hidden laughter/ Of children in the foliage" (l. 171-172). For Eliot, it seems that the innocent, inexperienced mind of children can grasp the notion of the spacetime continuum easier than adults.

The emergence of relativity theory in Eliot's writing reaches a stylistic apex when Eliot writes the line "Quick now, here, now, always" (l. 173). In the short syllables of the line, it echoes "HURRY UP PLEASE ITS TIME" in *The Waste Land*. Both seem to be calls for the eternal now as stated in language. The lines imply the eternal

present blurred by the quick rhythm of the syllables themselves. In both cases, the speaker of the line is unclear. In "Burnt Norton" the kingfisher or another bird seems to call out these lines. In *The Waste Land*, we assume it to be the barkeep of an English pub sounding the last call for drinks. The lines invoke an acceleration that for us approaches the speed of light.

Einstein's Legacy

Throughout the development of physics and metaphysics, nearly every theory has held onto a notion of a center, an Unmoved Mover, an ether, a watchmaker God, an absolute. Aristotle gave us the legacy of the unmoved mover—the implication of which leaves us with God as the center of the universe, the point by which all others are referenced. Using deductive reasoning, Plato and Euclid believed an ideal form existed for which all others are based. These reference points do not actually exist in this reality but in the reality of God. For Newton, the reference point was absolute rest and the absolutes of space and time. (Newton upheld that God created these absolutes even though William Blake believed that Newton removed God from the universe). Kant later said that space and time were not absolute quantities.

Finally, in the twentieth century, Einstein took what physicists and philosophers had found to be true for empirical knowledge and questioned its authority. Through his Special Theory of Relativity, Einstein showed not only that Yeats' center cannot hold but also showed that the center does not exist. Hence, he took our common sense deduction that there must be the pur-ist of pure, the holiest of holy, and the best of the best and argued that there was no absolute reference point. All points are relative to the speed of light—the only absolute Einstein leaves with us; even in defining his absolute, Einstein had to define it within the confines of time. His legacy broke down our knowledge of the center, God, and the unmoved mover, but he creates a world based on relationships—the relativity of objects. Eliot, through his own images in "Burnt Norton," seems to recognizes the void left without a center, but whether spacetime successfully replaced this notion in Eliot's mind is mere speculation. As T.S. Eliot so eloquently concluded his lecture series on *The Use of Poetry and The Use of Criticism*: "I am content to leave my theorizing about poetry at this point. The sad ghost of Coleridge [or Einstein] beckons to me from the shadows" (149).

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The Handglass of History

by Jackie Alford

According to Walter Crane, author of *The Decorative Illustration of Books*, "if painting is the looking-glass of nations and periods, picture-books may be called the handglass which still more intimately reflects the life of different centuries and peoples" (2). The synthesis of art and literature is found in manuscript illumination; however, there are different theories surrounding the development of the relationship between art and literature, as shown by the contrasting theories of Theodor Birt and that of Carl Roberts and Franz Wickhoff. Regardless of the exact steps taken to connect the visual arts and literature, the medieval monks exploited illuminated manuscripts in their efforts to convert the people of the British Isles. Subsequently, this area is known as the center of Western Medieval Manuscript Illumination (Zbinden 9). Producing such works as the *Book of Lindisfarne* and the *Book of Kells*, the British Isles took what was already known and done with the art of illumination and miniatures and built upon it, creating an air of intrigue and allowing art historians of today to view an intimate portrayal of the beliefs and culture of the Middle Ages.

The literal meaning of manuscript is "written by hand" (De Hamel 7). Traced back to simple penmanship, illumination is the revival of the picture words that once composed the Arabic alphabet, as they were gradually abstracted and placed together to form words (Johnson 204). In doing so, illuminations and decorations enrich the page and help tell the story of the text, giving a visual form to the literature (Hutton 232).

There are many individual theories concerning the union of the visual arts and literature. Josef Strzygowski was the first scholar to assume an art historical point of view on the problem of ancient book illumination in his work *Alexandrian World Chronicle* (Weitzmann 7). Establishing two categories of illustration, the papyrus type and the parchment type, Strzygowski proposes that the two categories began separately and later merged together.

Theodor Birt suggests an alternative theory, contesting that continuous picture friezes were generally produced with little to no accompanying text. Knowing that illustrated papyrus rolls influenced works in other media in order to create an eternal form of the artist's work, Birt believes that this is the most faithful and immediate copy of an illustrated classical roll, having been

conceived in the form of a papyrus roll and transferred to the barren column (123). However, the existence of illuminated manuscripts appearing with written text in ancient Egypt discredits Birt's theory that written text and illuminations generally appeared on separate papyrus rolls.

The oldest illuminated roll comes from the Egyptian Middle Kingdom. Found in Ramesseum near the Thebes, the *Ramesseum Papyrus* is a ceremonial play honoring the accession of Sesostris I to the throne. Being the second king of the XII Dynasty, historians have placed the date of the *Ramesseum Papyrus* to be around 1980 B.C. (57). Using the hieroglyphic figure style, which is simply enlarged hieroglyphics, the *Ramesseum Papyrus* suggests the early art form of illumination. In this fashion, the text dominates and the complementary pictures are subordinate (58).

In the XXI Dynasty of Egyptian history, beginning in 1080 B.C., an important change occurred that would ultimately transform the art of illuminations and the art of books in general. During this time, scribes and artists began using hieratic hieroglyphic script, consisting of hieroglyphics written in horizontal lines of a limited length, with lines following it placed directly under it, creating a writing column on the papyrus roll (61). Prior to this, Egyptians used linear hieroglyphic script, creating a column form of writing. This change in writing allowed the easy placement of illuminations in a frieze at the top or bottom of the roll.

The steps that the Egyptians took in illuminating their papyrus rolls were developed further by the Greeks. After Alexander the Great conquered Egypt, the Egyptians and the Greeks came in close contact in the city of Alexandria, and it was here that the Egyptians exerted their influence on the Greeks (66). However, Greece's conquest of Alexandria did not introduce the Greeks to papyrus because, even before they came to Alexandria, they wrote on papyrus. Imported from Egypt, it is possible that the Greeks may have seen some Egyptian illuminated rolls prior to their victory over Egypt. Despite the relatively recent study of the *Books of the Dead*, it is unlikely that the Greeks used these books for models of illustration due to the fact that most of them were buried in tombs. The Egyptian texts that the Greeks modeled their illustrations after remain only in fragments, because these were out in the open and were forced to survive the elements of nature.

The union of art and literature is initially noted by the first manuscript to exist with illuminations, that being the *Ramesseum Papyrus*. However, many important steps occurred after the creation of the *Ramesseum Papyrus* to truly unite the two art forms and mold them into one. Ancient Egyptian works, such as the *Palette of King Narmer*, provide early examples of the use of conceptual art, in which the artist attempts to convey an idea or concept by creating visual images from his or her memory (Tansey 78). However, it was not until the early Greek geometric period that this process was further developed and used readily in manuscript illuminations. Inspired by mythologies and epic poems, the Greek change to conceptual art coincides with the Greek victory over Egypt (Weitzmann 67).

The process of unification and integration of text and illustration covered almost the entire Greek history. When examining the development of the relationship between text and pictures in his work *Bild un Lied*, Carl Robert developed three stages in the unification process, which were later supported by Franz Wickhoff in his work on the *Vienna Genesis* (12).

Under this theory, the first stage of development in the unification between text and illuminations is the simultaneous method, characterized by several actions occurring at once within one scene (14). Depicting three consecutive actions in the one scene, the artist has transgressed the limitations of space and time. Only so many actions can occur within one scene, and it is the full exploitation of this method that leads to the next stage in the unification of art and literature, the monoscenic method.

The monoscenic method, which came to prominence in the fifth century B.C., dominates both the fifth and fourth centuries B.C., and continues into the third century B.C. even after the introduction of the next method (14). Based on the principle of the unity of time and place, the monoscenic method limits one action per scene and is characterized by individual attitudes of expression. Examining the new gestural expression, Carl Robert noticed that the monoscenic method appears around the same time that classical drama was born, with both art forms adhering to the same principals of time and place unity (Weitzmann 14). Putting the two together, Weitzmann goes on to say, "the greater expressiveness in the gesticulation of painted figures can be ascribed to a strong influence from the drama" (14). However, through the fifth century B.C. only the gesticulation of the drama exerts influence on the representational arts and not the actual text of the drama. The positive facets of the monoscenic method reach their limit when artists attempt to group many elements together within a single iconographic unit. With this in mind, the cyclic method was introduced.

The cyclic method introduces a series of consecutive compositions coinciding with each changing situation of the text using the repetition of actors to maintain the rules of time and space unity, solving the problems found in both the simultaneous method and the monoscenic method (17). The term cyclic was chosen to describe this method because it implies iconographic coherence and dependence on a uniform textual source (21). Marking another stage in the union of art and literature, the cyclic method corresponds to the eye movement used when reading a text. When looking at a cyclic illumination, the eye moves from one scene to the next as it follows the story line, just as the eye would move if it were actually reading the text.

Carl Robert's stages of development deal directly with the integration of literature and the visual arts. However, the manuscript and area of book production was transforming simultaneously. According to Weitzmann, "the most fundamental change in the whole history of the book was that from roll to codex" (69). The codex was a system of separate pages bound at one side so that after the onlooker finishes reading one page he or she turns the page over to continue with the story line (Tansey 277).

L.D. Reynolds and N.G. Wilson place the transition from roll to codex between the second century and fourth century A.D. (29). Christopher De Hamel concurs with this time period, which places the change from roll to codex to occur in the first centuries A.D. (7).

With the rise of Christianity and the codification of Roman laws, the transformation from the scroll to the codex allowed easy reference back and forth between the individual works (De Hamel 7). Examination of a papyrus roll requires the reader to gradually unroll the text, using one hand to reroll the text already read, and results in a reverse coil of the text which must be unrolled again before it can be read by another viewer (Reynolds 2). Rather than referring to the papyrus roll text itself, the ancient reader would often rely on his own memory to call forth a passage, leading to numerous versions of the quoted passage and misquotations.

In the second century, a process was developed in Pergamum to treat lamb skin, making it suitable as a writing surface and more durable than papyrus (Reynolds 3). The papyrus roll, prepared by cutting thin strips from the core of the papyrus reed and placing two layers of these strips at right angles to each other while pressing them together to form sheets, was not durable enough to hold gouache paint (Reynolds 3). Undergoing extreme wear and tear during its lifetime, gouache illuminations on a papyrus roll would flake as a result of the constant bending and cracking of the unstable papyrus. The introduction of the codex helped prepare the way for the use of gouache, as the pages were no longer bent and contorted as use persisted. The change to the codex and the change in the codex medium is the joint reason illuminations from this time period exist today, and it was for this reason that more durable sources, such as the Megarian terra cotta pots, were the chosen examples for Carl Robert's stages of literature and visual art unification.

Gradually the square codex evolved into a more rectangular form. With this transformation came the use of fewer columns, generally developing from three or four columns to one or two columns. The reduction of columns allowed more space for illuminations, giving the miniatures more prominence within the text and foreseeing the gradual split between the text and the illuminations.

The added space given to the miniatures was followed by the equal allotment of space to the text and illuminations, as seen in the *Vienna Genesis*, the earliest well-preserved manuscript with illuminations depicting biblical scenes (Tansey 278). Created in the beginning of the sixth century, the *Vienna Genesis* is a Bible fragment with illuminations placed on the bottom half of the page with the corresponding text on the top half of the page (Weitzmann 89). Using this layout, the illuminations are no longer intermingled and entwined within the text, but given their own distinction instead.

From the allotment of equal space between the text and pictures, the full-page illumination developed (Weitzmann 93). In this state, the illumination is almost entirely independent from the text except for the material from which the illumination derives its inspiration. Although the full page min-

iature occurred soon after the invention of the codex, the illustrations were not derived from the text, but were generally pages giving credit to the authors and other notable people (Weitzmann 104).

The full-page illumination sparked the use of frames and borders in smaller illuminations within the text itself (104). According to Edward Johnson, the extension of the illuminated initial letter, or historiated letter, is accountable for the growth of the ornamental border (211). Despite the differing opinions, these simple borders distinguish the picture from the text and allow it to become more its own object despite its subordinate position within the text page (Weitzmann 97). Eventually growing into immense decorative structures, the border developed the use of backgrounds in the illuminations, distinguishing the picture from the text and placing it on a three-dimensional plane while the text remained on a two-dimensional plane (102).

Ultimately the landscape background was abstracted by artists into an ornamental pattern (Weitzmann 102). Representing the continuous forces that art and literature play on each other, the abstract background brings the illumination and the text back on the same two dimensional plane. In this same way, the addition of unplanned miniatures to the unused writing space brings the illuminations and text into harmony (113).

According to Edward Johnson, there are three broad types of illumination, each involving distinctive treatments: Barbaric, Filigree, and Natural (194). Barbaric, or color-work, appeals to the senses through the skillful disposal or intricate arrangement of subject (195). Filigree, or pen-work, consists mainly of pen flourishes or semi-formal lines and shapes, characterized by simple detail and smooth coloring (197). Natural, or limner's, is the finest type of illumination, depending solely on the beauty and interest of its form. It is the culmination of these types of illustration that cause the work of illuminated manuscripts to capture the eye of even the illiterate (203). For this reason, the monks exploited the use of illuminated manuscripts in missionary trips to the British Isles during the early Middle Ages. With more books surviving from the Middle Ages than any other artifact, it seems natural that the force of Christianity and the tangibility of book production would combine (De Hamel 7).

The merger of visual arts and literature in illuminated manuscripts reached its apex during the Middle Ages, especially flourishing in the Anglo-Saxon region. Reference to medieval manuscripts is usually considered to be the production of books by had in Europe between the fifth and the fifteenth centuries A.D. (De Hamel 7).

In 597 A.D. Saint Augustine landed in Southeast England claiming to have news of eternal life to share with King Ethelberht of Kent (De Hamel 11). The Gospels of the Bible, acting as "God's transcendent and absolute will, law and wisdom, a container of the divine plan and itself a sign of the totality of that plan in the world," were the main vehicle of conversion for his and later missionary crusades (Gellrich 32). Concentrating on the Southern part of England, St. Augustine was ordered by Pope Gregory the Great to convert the island of England to Christianity, as Columba had already es-

tablished the island of Iona as a center of Christianity in 563 and the doctrines and ideas of Christianity were spreading gradually into Northern England (Reynolds 75). According to Bede, who wrote the Ecclesiastical History of the English People in 731 and is known as the "Father of English History," the missionaries approached King Ethelberht carrying a silver cross and the image of the Savior painted on a board (Backhouse 62). De Hamel claims that "St. Augustine's landing story shows the importance that the monks should exhibit a visual image of the new religion which could be seen and wondered over even before they began explaining the message of Scripture" (11).

It is not known as to which manuscripts were brought on this missionary trip; however, it is thought that St. Augustine had a copy of Pope Gregory the Great's Pastoral Rule (De Hamel 11). Most of the books possessed by the late medieval monks of St. Augustine's Abbey believed to be from St. Augustine's collection have been discredited, except for one Gospel Book. A sixth century Italian illuminated copy of the Four Gospels, this Gospel Book may now be found at the Corpus Christi College in Cambridge (Backhouse 20). Known to have been in England by the late seventh century, the Gospel Book is very likely the one used by St. Augustine in his conversion of the people of the British Isles (De Hamel 12).

With literacy and Christianity so closely connected, illuminated Gospels served as tangible proof of the written revelation of Jesus Christ. According to Pierre Bersuire:

For Christ is a sort of book written into the skin of the virgin....That book was spoken in the disposition of the Father, written in the conception of the mother, exposited in the clarification of the nativity, corrected in the passion, erased in the flagellation, punctuated in the imprint of the wounds, adorned in the crucifixion above the pulpit, illuminated in the outpouring of blood, bound in the resurrection, and examined in the ascension (Gellrich 17).

The foundation of the written word of God allowed missionary monks to combat the local oral religion of the region, offering a manual of sorts for salvation. The image of the Last Judgement in which Christ appears holding two fingers up and the Book of Salvation further emphasizes the magnitude of the book for missionaries (Zbinden 6).

Through illuminated manuscripts, the missionary monks reached out to the common people of England and Ireland and brought them into the wondrous word of God. Decorated because they contained the word of God, the elaborate illumination honored and praised the Almighty Lord, whose complexity and mystery are mirrored in the delicate work of the illuminator (37). Illuminated not only for man's eyes, but for the glorification of God, the sacred character of the book is revealed in its elaborate binding, since the material lavishness taken in creating the book was a symbolic interpretation of the religious truths expounded in it (6). The decoration itself also served a protective function (De Hamel 36). With illuminations of the Evangelist symbols and

crosses at the beginning of the manuscript, it was believed that the work was protected from evil and vice.

Often the decorations within the manuscripts were used as reference points in the work (36). In this way, the historiated letter and first words of liturgical or Biblical text are transformed into a sacred symbol and sign, "In the beginning was the Word, and the Word was with God, and the Word was God" (Zbinden 8). Also known as versals, a word coined by Edward Johnson during the twentieth century, these decorative letters bring harmony within the text and illuminations, and attract the attention of the viewer's eye (Oliver 225).

However, at a few feet, the intricate detail of the historiated letters lose their clarity. Out of curiosity, this aspect brought the uneducated viewer into the work for a closer look. With the aid of large full-page miniatures and smaller text illuminations, the missionaries captured the mind, imagination, and soul of the pagan. For the fortunate people who had close access to the ornamental works, the decorations brought with them a spiritual feeling of honor and glory to God (De Hamel 37). According to Giraldus Cambrensis, twelfth century writer of *Topographia Hiberniae*, "Look more keenly at it and you will penetrate to the very shrine of art. You will make out intricacies, so delicate and subtle, so exact and compact, so full of knots and links, with colours so fresh and vivid...For my part, the oftener I see the book, the more carefully I study it, the more I am lost in ever-fresh amazement, and I see more wonders in the book" (37).

With the immense decoration of the reli-gious processional and ritual books, it appears that the text was no longer used as a cue for speech. Medieval monks read in a form called meditatio, "in which every word was masticated and digested for memorization by being uttered out loud" (Camille 18). With this in mind, the page layout, word separation, and readability of the word mattered little and the page of text became the terrain of artistic play.

According to M.C. Oliver, the earliest examples of decoration on vellum with formal handwriting are the Book of Durrow, the *Lindisfarne Gospels*, and the *Book of Kells* (224). These Christian manuscripts demonstrate the characteristics of missionary illumination proposed above and continue to capture the minds and imaginations of people today. Of the three, however, the *Book of Lindisfarne* and the *Book of Kells* remain in prominent discussion due to the mystery that surrounds them. This was created in north-east England less than one hundred years after Christianity was introduced there (Backhouse 7). Completed in 698 A.D., the *Lindisfarne Gospels* were intended to be a showpiece (De Hamel 21). The Monastery of Lindisfarne, in which the Gospel book was made, was founded around 635 A.D. by St. Aidan on a small outcrop of land one and a half miles off the Northumberland coast (7). Known as the Holy Island, twice a day the sea cuts the island off from the mainland with its surging waters. Because the colophon, an inscription placed at the end of a book with information as the production of the book, is still intact in the *Lindisfarne Gospels*, there is no question as to the authors of the manuscript. According to the colophon:

Eadfrith, Bishop of the Lindisfarne Church, originally wrote this book, for God and for Saint Cuthbert and - jointly - for all the saints whose relics are in the Island. And Ethelwald, Bishop of the Lindisfarne islanders, impressed it on the outside and covered it - as he well knew how to do. And Billfrith, the anchorite, forged the ornaments which are on the outside and adorned it with gold and with gems and also with gilded - over silver - pure metal. And Aldred, unworthy and most miserable priest, glossed it in English between the lines with the help of God and Saint Cuthbert..." (Backhouse 7).

Given credit and homage in the colophon, St. Cuthbert is important to the history of the Monastery of Lindisfarne and the creation of the *Lindisfarne Gospels*. Known as a saintly man with miraculous powers, St. Cuthbert transformed the monastery of Lindisfarne from a place lacking discipline to an establishment practicing the rites and rituals of traditional monks (9). After his death on March 20, 687, St. Cuthbert was buried in Lindisfarne (9).

The marking point of sainthood comes when the bones of the deceased are "elevated" (10). After the body is buried and enough time has passed for the soft parts of the body to disintegrate, the bones of the saint are brought out of the grave so pilgrims may visit them. In 698, eleven years after St. Cuthbert's death, the order was given to elevate St. Cuthbert's bones; however, when the grave was opened, the body was found undecayed. Placed in a casket in the sanctuary for all to view, some pilgrims reported miracles upon seeing the body of St. Cuthbert (10).

It is believed that the *Lindisfarne Gospels* were written during the eleven years that the body of St. Cuthbert was buried. During this time period, Eadfrith, the author of the Book of Lindisfarne, was still a senior member of the community. However, after the elevation of St. Cuthbert, Eadfrith became Bishop and probably would not have had ample time to create the *Lindisfarne Gospels* (14). It is also known that Ethelwald, the binder of the *Book of Lindisfarne*, moved to Melrose sometime between 699 and 705, not returning to Lindisfarne until 721. Therefore, it is probable that he bound the *Book of Lindisfarne* before he left.

After a series of Viking attacks between 793 and 875, the monks and people of Lindisfarne left the Holy Island. Symeon of Durham records in the twelfth century that as the monks attempted to cross the sea to Ireland a great storm arose and the *Lindisfarne Gospels* was swept to sea (De Hamel 24). Taken as a sign of displeasure from St. Cuthbert, the voyage was disbanded and the Gospel Book was thought to be forever lost. However, St. Cuthbert appeared in a dream to Henred, one of the men put in charge of the relics taken on the journey, telling the exact location and time the manuscript may be found. Upon searching for the *Lindisfarne Gospels* as St. Cuthbert directed, the book was discovered (Backhouse 11).

The party settled in Chester-le-Street in the County of Durham, where the relics stayed until 995, and it is here that Aldred

added English to the text in the Tenth Century, as noted in the colophon. Except for rubrics and contemporary corrections, the *Book of Lindisfarne* was written by one hand, and the decorations are so closely linked to the writing that they are probably also the work of the scribe (14).

According to Aldred's additions, each of the Gospels had its own intention, with St. Matthew was written for God and St. Cuthbert, St. Mark for the Bishop, St. Luke for the community, and St. John for the sake of his own soul, with the addition of eight ores of silver for God and St. Cuthbert (16). Containing two versions of the Gospel text, the *Book of Lindisfarne* was the principal ceremonial gospel book of the Lindisfarne community, used for processions and readings (Gameson 42).

The main text of the Gospels is in a fine, formal script, known technically as insular majuscule (Backhouse 22). Developed by early Christians in Ireland, insular majuscule script spread to Northumbria, Iona, and other parts of England through missionary trips. Written in two columns, the *Lindisfarne Gospels* is believed to be made of calfskin vellum (27). Both parchment and vellum were readily used in North England during this time; however, there are one or two brown hairs still on the pages of the *Lindisfarne Gospels*, suggesting a calfskin surface. Consisting of two hundred fifty-eight pages, the *Book of Lindisfarne* is written in dark brown ink; however, there is no way of knowing what implements Eadfrith used to apply the text or color.

Containing fifteen fully decorated pages, the *Book of Lindisfarne* has an illustration of each author of the Gospels preceding the Gospel text itself, along with his ecclesiastical symbol and a cross-carpet page. Among these is the figure of St. Matthew, inspired from Mediterranean pictures and illuminations. Wearing sandals, with soles of the shoes omitted, St. Matthew is accompanied by his symbol of a winged man blowing a trumpet and carrying a book. With face and hair reduced, a strong linear pattern emerges from within the illumination. It is notable that this illumination is derived from the same model from which the scribe Ezra in the Codex Amiatinus is extracted (47). Janet Backhouse goes on to say, "Eadfrith adapted the basic figure to suit his own personal style and added to it the Evangelist's symbol and the mysterious figure peeping round the curtain" (83).

The St. Matthew cross-carpet page is drawn on a defined cross. Examination of the back of the leaf shows that it is built from a complex grid originating in the center of each segment of the cross (Backhouse 51). The axial symmetry of the cross is composed of five semi-circular, bell-shaped figures, stressed by the twelve borderlines that surround the entire illumination (Gellrich 60). Noted by the use of the circle in each of the bell shapes, the illuminator may have possibly been suggesting the perfect, unending love that Christ radiates, as each of the bell shapes may refer to the chalice used in the Eucharist. The intricate interlaced figures of serpents and birds that cover the space inside the cross and outside the cross may be a reference to the serpent that tempted Eve (60). The reference to snakes seen biting images of birds are found on the bottom half of the page, along

with birds biting their own necks to slay themselves. This imagery recalls common medieval mythologies of the phoenix and the pelican as birds of self-death and new life. In the top portion of the illumination, the snakes are being bitten by the birds. This series of illuminations may suggest that "the serpents of evil will be devoured - as Mary was said to crush the serpent's head - by the pelican, the dove, the Christian soul, and Jesus Christ, although they will be threatened and 'bitten' in that saving work" (60).

The curvilinear motifs of the historiated letter beginning the Gospel of Matthew reads "Liber generationis Ieus Christi filii David filii Abraham," or "The Book of the generation of Jesus Christ, the son of David, the son of Abraham" (Backhouse 51). Using marginal bounding panels of pure ornament, the opening historiated letter of St. Matthew consumes the page devoted to it. The second ornately decorated initial page of the Gospel of Matthew marks the beginning of the Christmas story (44). Decorated with swirled circular ornaments, known as peltas, knot interlacements, images of birds and serpents, the historiated initial gives further reference to the cross carpet page of St. Matthew. It is interesting to note that a connection has been made between this versal of the *Lindisfarne Gospels* and the Tara Brooch, an eighth century piece of Irish costume jewelry (Tansey 355). The animal interlace that composes the interior of the "XPI" in the historiated letter is found in the border of the Tara Brooch. The exterior of the historiated letter is marked by repetitions and variations of the pelta. This design is also replicated on the opposing border of the Tara Brooch.

It is unknown, however, if the illuminations that characterize the Gospels of Lindisfarne inspired the ornamentation of the Tara Brooch.

Equaling the *Book of Lindisfarne* in accuracy of drawing and softness and harmony of color is the *Book of Kells*; however, the *Book of Kells* surpasses the *Book of Lindisfarne* in its lavish ornamentation (Sullivan 137). Differing in the attitude of the work, the *Lindisfarne Gospels* contains illuminations of light, gay colors, giving the work an aura of brightness, while the *Book of Kells* contains darker, heavier tones, displaying a somber dignity.

As the most costly relic of ancient Celtic art, Sir Edward Sullivan says of the Book of Kells:

> It's weird and commanding beauty; its subdued and goldless colouring; the baffling intricacy of its fearless designs; the clean, unwavering sweep of the rounded spiral; the creeping undulations of serpentine forms, that writhe in artistic profu sion throughout the mazes of its decorations; the strong and legible minuscule of its text; the quaintness of its striking portraiture; the un wearied reverence and patient labour that rought it into being; all of which combined go to make up the *Book of Kells*, have raised this ancient Irish volume to a position of pageabiding preeminence amongst the illuminated manu scripts of the world (1).

As to its date and origin, little is known (De Hamel 21). The last few leaves of the *Book of Kells*, which would include a colo-

phon, have been lost for quite some time. And due to this discrepancy, there are many debates over the date and origin of this manuscript. Early commentators on the *Book of Kells* claim the date to be in the sixth century (Sullivan 27). Sir E.M. Thompson and Dr. Middleton, scholars on the *Book of Kells*, claim the date to be in the latter half of the seventh century (27). According to M.C. Oliver, the *Book of Kells* was written in 700 A.D. (Oliver 225). Dr. E.H. Zimmermann, in his 1914 work "Die Vorkarolingischen Miniaturen," supports M.C. Oliver, claiming the date to be 700 A.D. (Sullivan 27). This date would make the *Book of Kells* contemporary with the Book of Durrow. However, in comparing the two manuscripts, Rev. Mr. Stanford Robinson and Dr. T.K. Abbott assert that the *Book of Kells* could not have been produced earlier than the Eighth Century (27).

J.A. Brunn dates the *Book of Kells* in the ninth century, basing this claim on the fact that Irish decoration prior to this time did not have foliage ornamentation seen in the *Book of Kells*; however, it is hard to find many examples from the earlier period of Iris ford 21h decoration. With the many unfinished portions of the *Book of Kells* continued by an inferior hand, it would seem likely that these additions were completed after the art of illumination deteriorated in this area. The "Annals of Four Masters" provide the names of sixty-one excellent scribes in Ireland before 900 A.D., with forty of them living between 700-800 A.D. (Sullivan 28). This information leads to the assumption that the *Book of Kells* was reworked after 900 A.D. by inferior artists, giving it an earlier date of original comple-

tion. Contradicting this is the use of a square shape for punctuation in the *Book of Kells*, which was not common until the tenth to twelfth centuries (36). Studying the contraction marks used in the *Book of Kells*, Ludwig Traube concluded that the *Book of Kells* is from a later date (Sullivan 29). However, the majority of paleographers date the *Book of Kells* no later than the Eighth Century (41).

Adding to the question of the *Book of Kells*'s date is the use of St. Jerome's *Vulgate*. Adopted by the Church in Rome in the sixth century, the Irish were slow to adopt this version of the Bible. Due to the remoteness of the island, it is probable that the *Vulgate* had a harder time being accepted because the primitive practices and doctrines of the Church were established. Adhering to the Old Italic or Ante-Hieronymian texts and modifications of it until the ninth century, the Irish slowly mixed the *Vulgate* into their practice (23). As a result of this, the *Book of Kells* is a mixed text, with some parts of the manuscript following the *Vulgate* closely and other parts having nothing in common with the *Vulgate*. This kept in mind, the date of the *Book of Kells* must definitely be after the sixth century and not much later than the ninth century. With all of these contradicting dates of the *Book of Kells*, no one can be sure which century it belongs to, ranging anywhere from the sixth century to the ninth century (27). However, it is known that by the twelfth century the *Book of Kells* was present in Kells, just thirty miles northwest of Dublin (De Hamel 21).

The questionable origin of the *Book of*

Kells is not as compound as that of the question of date. Not known for sure if the *Book of Kells* is Irish, Scottish, or English, the manuscript derives its name from the Columban Monastery of Kells, founded in 550 (Crane 13). Although discrepancy surrounds the origin of the *Book of Kells*, one theory dominates. According to Walter Crane, the *Book of Kells* was brought by St. Columba, the founder of the Christian settlement in Kells, and possibly even written by St. Columba himself (13). Christopher De Hamel contests that while St. Columba may have written the *Book of Kells*, it was more likely brought to Kells by monks fleeing Iona as Vikings invaded it in the Ninth Century (21).

Otherwise known as Colum Cille, or Columb of the Church, St. Columba resigned his hereditary claim on the kingship of Ireland to devote himself to monastic life. Leaving Ireland in 563 A.D., St. Columba traveled to the island of Iona, where, with the help of his followers, he transformed the island into the center of Christian civilization in North Britain.

St. Columba was a known collector of books. According to his biography by O'Donnell, St. Columba is credited to have transcribed three hundred copies of the Psalter (Putnam 45). With stories and folktales of St. Columba cursing a doctor who would not allow him to view his private book collection, St. Columba was a renowned student and scribe of manuscripts (45). Known to have the ability and desire to produce incredible works, it is the opinion of Eugene O'Curry that the *Book of Kells* is the work of St. Columba (47).

Over two hundred years after his death, in the year 802, the island of Iona was invaded by Norseman (Sullivan 3). This invasion forced the people of Iona to flee to the west. Fleeing to the Monastery of Kells for refuge, it is believed that the decoration was completed here (McNeill 125). The struggle against foreign forces was not over for the people of Colum Cille because, from the late Ninth Century to the end of the Tenth Century there was a continuous string of invasions.

By the year 1006, the *Book of Kells* was preserved in the church and later in this same year the manuscript was stolen. Found later under sods without its gold cover binding, most of the leaves now missing from the *Book of Kells* disappeared around this time period (Sullivan 4). In 1539 the Abbey surrendered to the Crown under Abbot Richard Plunket, and shortly after this the *Book of Kells* is known to be in the hands of Gerald Plunket (5). Probably a relative of the last Abbot, Gerald Plunket wrote notes in the margins of the *Book of Kells* declaring that some of the leaves originally in the *Book of Kells* were missing (Sullivan 6). Passing through the hands of King James I, the *Book of Kells* now resides at Trinity College in Dublin.

Paleographers believe that Giraldus Cambrensis was referring to the *Book of Kells* in his twelfth century work *Topographia Hiberniae*, where he writes about a great manuscript work that he viewed at the religious foundation of St. Brigid in Kildare between 1185 and 1186 (4). Devoting two chapters to this miraculous manuscript in *Topographia Hiberniae*, Cambrensis recorded that he saw a copy of "the Four Gospels traditionally assigned to

the days of the patron saint of that house" (Bruun 100). In referring to this manuscript, Cambrensis said, "On one page you see the face of God, drawn in godlike fashion - in another, the forms of the Evangelists with either six, four, or two wings" (Sullivan 5). This quotation leads some to question of which manuscript Cambrensis is speaking of, since there is presently no Evangelist in the *Book of Kells* with six wings. There is also no reason why the *Book of Kells* would be in Kildare for Cambrensis to see, and it is wondered why Cambrensis did not mention the loss of the *Book of Kells*, as the story was widely known at that time (5). Despite all of this, it is still believed that Cambrensis was indeed referring to the *Book of Kells* when he said that the manuscript he saw was "the work of an angel, not of a man" (De Hamel 21).

Presently the *Book of Kells* has 339 pages of thick, glazed vellum measuring 13" by 9.5"; however, it is known that not only was the original work of more leaves, but that the present size is smaller than originally constructed, since around one hundred years ago a bookbinder "trimmed" the outer margins of the manuscript (Sullivan 6). With an average of seventeen to nineteen lines per page, it can be calculated that some twenty-four pages are missing from the text alone due to the missing portions of St. John and St. Luke (22). In all, there are approximately fifty-eight pages missing from the manuscript, including the colophon (23).

It is also apparent that more than one scribe wrote the text of the *Book of Kells* in early Irish calligraphy (32). Before the arrival of St. Patrick in 430 A.D., Ireland had no written language (31). After converting the Irish kings, Druids, and inhabitants of Ireland, St. Patrick's greatest achievement was introducing Latin and making it the ecclesiastical language of Ireland. Teaching candidates for Irish clerical careers to write the alphabet, the script of Ireland can be directly attributed to St. Patrick. Many paleographers believe the neatness and firmness of the handwriting in the *Book of Kells* can be identified with the use of extremely sharp metallic pens or reeds; however, Dr. Killre rejected this claim because early Irish pens were quills of swans, geese, crows, and other birds (34).

The ornamentation of the *Book of Kells* can be broken down into four major categories: (1) geometric combinations of straight or curved lines forming the sole element, with subdivisions of spiral patterns and interlacement; (2) animal forms; (3) leaf or plant forms; and (4) figure representations (Sullivan 36). According to J.A. Bruun, the geometric spiral division is a "system of volutes closely coiled in circular curves,... each with a varying number of adjoining volutes" (107). Bruun characterizes the geometric interlace design as "ribbons or straps of uniform size, which are twisted, plaited, knotted, or otherwise interwoven so as to cover the field with a symmetrically disposed design" (39).

Animal forms are noted throughout the *Book of Kells*. Hidden in the geometric spirals and interlacements, these natural figures often carry a symbolic meaning. The abundant use of snake ornamentation suggests an ancient tradition to worship snakes, consistent with the fable of St. Patrick driving snakes out of Ireland. Through the es-

tablishment of Christianity, St. Patrick disposed of the worship of snakes and, thus, the snakes themselves (Sullivan 42). To attract converts and expedite the conversion process, the Church retained the use of the pagan symbol of the snake and, thus, the profusion of snake and reptile motifs, allowing the Word of God to become "a habitation of dragons" (Camille 17).

The use of forms derived from nature is seen again with the implementation of foliage images. The use of plant forms was unknown to early Celtic illuminations. Characterized by a single wavy stem with alternating scrolls ending in trefoil-shaped leaves, the foliage details are a distinguishing characteristic from works like the *Lindisfarne Gospels* (Sullivan 40).

According to J.A. Bruun, the use of figures in the *Book of Kells* comes from non-Celtic models, possibly of Byzantine or Italo-Byzantine origin (43). The distorted figures found in the *Book of Kells* are explained by the fact that no form of humanity is fit to personify holy beings, and the avoidance of reality further intensifies the reverent spirit (45). The aim of the illuminations not being life-like portrayal, but emotional suggestion and response, the misshapen figures reveal the spiritual world surrounding the *Book of Kells* (Zbinden 11). The image of St. Matthew and his accompanying decorations correspond to the divisions proposed by Sullivan. With the Ecclesiastical symbol of an angel (or a man with wings) to represent the human side of Christ, St. Matthew's portrait page in the *Book of Kells* is a frontal picture of the saint on a throne. The symbol of St. Mark, the lion, is seen at each side of the back of the throne, with the heads of St. Luke, the calf, and St. John, the eagle, appearing behind the edges of the seat. Modeled after the flabellum, an Early Church instrument used to keep flies away from the altar, the arch above St. Matthew is intricately decorated (Sullivan 11).

The opening words of the Gospel of St. Matthew, "Liber generationis", are noted by the use of spiral ornamentation. The figure standing in the lower left-handed corner of the page, probably an addition by a later artist, is said to be the Evangelist, and there is the possibility that the figure at the top of the page is representing St. Matthew (11).

The eight-circled cross preceding the monogram page of St. Matthew is the only one of its kind in the *Book of Kells*; however, it does have a similar counter part in the *Book of Lindisfarne* (15). Westwood, author of *Palaeographia Sacra Pictoria*, hypothesizes that each of the Gospels in the *Book of Kells* was once preceded by similar illuminations, but these leaves have been lost. With the double arms of the cross enfolding the eight circular medallions, the border decoration of the cross page is substantially similar to that of the six-circled cross page preceding the *Book of Lindisfarne*'s Gospel of St. Matthew.

Facing the eight-circled cross page of the *Book of Kells* is the monogram page, consisting of the opening three words of St. Matthew i. 18, "XPI [Christi] autem generatio" (Sullivan15). Rev. Dr. Todd, an authority on the *Book of Kells*, suggests that this page of the *Book of Kells* contains almost the entire network of designs found in Celtic art - trumpet patterns, interlaced

curved bands, knots, foliage, birds, and other forms derived from nature (15). Included in the animal forms of the monogram page, otherwise known as the Chi-Rho page, is the image of the moth, a symbol of the metamorphosis of the soul through Logos incarnate (Camille 18). There also appear to be two rats nibbling on Eucharist bread being scrutinized by two cats, which Rev. Mr. Robinson, a *Book of Kells* scholar, believes is the representation of the unworthy receivers and their impending judgement (Sullivan 15). For the early Irish Christians, the world of nature was incorporated into their spiritual life, and thus reflected in the natural images interwoven in the illuminations (Camille 18). Within this pattern of detail and richness, Westwood says that the Chi-Rho page is probably the most intricate specimen of calligraphy that perhaps was ever accomplished (Sullivan 15).

Just as many of the images in the *Book of Kells* are coiled up in an endless array of knots and twists, the history of the ancient civilizations is wrapped up and entwined within illuminated manuscripts. The *Lindisfarne Gospels* and *Book of Kells*, with all of their intricate ornamentation, tell the stories of the Gospels as they simultaneously reveal a historical story of their own. Although questions remain as to the evolution of the illuminated manuscript and the origins and dates of specific works, the history of man is preserved in the written word and the illuminations that accompany it, granting art historians and paleographers a window through time to view the culture and ideology of this distant past.

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Birmingham-Southern College and the Civil Rights Movement

by Jessica Missios

The city of Birmingham, Alabama, experienced innumerable historical and social transitions during the 1960s. The downtown area became a center for the Civil Rights Movement or "Negro Revolution." During this time, hundreds of racially spurned acts of violence, as well as the city's reputation of being "the most segregated city in America," (King 50) made it "an international symbol of bigotry and police brutality" (LaMonte 163). Dr. Martin Luther King Jr. wrote in 1963:

> You would have found a general atmosphere of violence and brutality in Birmingham. Local racists have intimidated, mobbed, and even killed Negroes with impunity. One of the more vivid and recent examples of the terror of Birmingham was the castration of a Negro man whose mutilated body had then been abandoned on a lonely road. No Negro home was protected from bombings and burnings. (49)

Birmingham became the site of mass demonstrations in 1963 which helped lead to the passing of the Civil Rights Act by President Johnson in 1964. This act played a major role in the "destruction of the city's rigid system of segregation in both public and private affairs" (LaMonte 198). In this way, the 1960s brought Birmingham not only increased social segregation and racial hostility, but legal decisions that would change the course of history for the city, the state, and the entire country.

Meanwhile, the institution of Birmingham-Southern College remained situated on "the Hilltop," only a few miles from Birmingham's Civil Rights District, which encompassed the majority of the city's demonstrations, marches, and sit-ins during the 1960s. The College remained an all-white institution from the time of its establishment as Southern University in 1856 until 1965. The College also declared as its fundamental mission "to provide a liberal arts education of distinctive quality that challenges students to think independently and communicate clearly, to examine the arts and sciences aesthetically and critically, and to be committed to intellectual and social responsibility" ("Mission" 10). However, many students remained isolated and therefore apathetic to the issues of intense controversy that held the city in chains of ra-

cial hostility and strict segregation. The changing views of the administration would play a major role in how the college presented itself on racial issues and, in turn, how the students reacted to those issues.

One such administrator was Henry King Stanford, President of Birmingham-Southern College from July, 1957 to June, 1962. In his five years at 'Southern, Stanford was faced with many confrontations and issues that forced him to take a stand in the community. In the Spring of 1960, a number of 'Southern students circulated a petition protesting Governor John Patterson's "action in forcing Alabama College to expel Negro sit-in demonstrators" (Salisbury 28). This petition was sent to the governor on March 10 and then a copy was sent to President Stanford. Stanford was supportive of the students' rights to express their concerns even though this cost him much public support. Eugene "Bull" Connor, Commissioner of Police and Education at the time, also received a copy of the petition and telephoned Stanford. Connor's main concern was how Stanford was planning on punishing the students that signed it. He began by asking, "Doc, aren't there just a number of Yankee students out there who are creating all of this agitation?" Stanford responded by explaining that most 'Southern students came from Alabama or the surrounding states and that the petition was not caused by Northern force. Contrary to Connor's wishes, Stanford chose not to reprimand the students for their actions (Stanford 1-2).

The following weeks were turbulent ones. In April, "a number of students from Daniel Payne College, a historically black institu-tion, staged a sit-in in a downtown restaurant. They were promptly arrested, put in jail, and released on bail" (Stanford 3). One Birmingham-Southern student, Thomas Reeves, felt so strongly about their cause that he decided to visit some of the Payne students on their campus on April 2. Reeves was reported to the police, who waited all night for him to come out of the residence hall in which he was visiting. After Reeves managed to escape to safety at daybreak, he was arrested on charges of "vagrancy" in front of the Woodlawn Methodist Church where he was serving as Assistant Pastor. He was kept in jail for three days before his father was able to bail him out. After Reeves and his father left the jail, they stopped at a barber shop on Arkadelphia Road for a haircut. Stanford recalls:

> While Reeves was in one of the chairs getting his hair cut, a second barber began talking with his customer in the other chair. The barber commented on how scandalous it was that a Birmingham-Southern student was trying to stir up trouble and speculated about what ought to be done to him. . . . The customer responded quickly to the barber's question. He said something to the effect that if Reeves weren't strung up, he ought to be run out of town.(4)

Of course, this created much fear and anxiety in both Reeves and his father. Reeves' father and Dr. Stanford decided that Thomas would remain on campus for his own safety and to keep from giving in to the pressures of the segregationists. Stanford noted, "If Reeves were withdrawn, the segrega-

tionists could say that they had driven him out of town or that they had forced me to dismiss him. I did not want to give them that satisfaction" (Stanford 5).

However, the Reeves incident was not over. The Birmingham-Southern Board of Trustees urged Dr. Stanford to call a meeting of the Executive Committee to discuss the current situation. On April 8, 1960, at 10:30 a.m., the committee met and Stanford announced that he would not be disciplining Reeves for his action. This, of course, produced great dissatisfaction among the other members, but the decision would stand (Stanford 5-6).

That night, Stanford looked out the window of his home on the BSC campus to find a cross burning in his yard. He remembers:

> Two policemen arrived quickly. When I went out to meet them, they offered an explanation immediately: "Doctor, why are you so upset?" My immediate response was: "Look what the Ku Klux Klan has done here on this campus and in front of my home!" They replied: "Doctor you are too upset. This is a fraternity prank!" I then inter jected: "But the Ku Klux Klan did it and you ought to investigate." Their next observation was very snide: "Doctor, this is not a genuine cross! Your fraternity boys did it." They turned and walked away. (7)

Four days later, on April 12, 1960, an article appeared on the front page of the *New York Times* under the headline, "Fear and Hatred Grip Birmingham: Racial Tension Smoldering After Belated Sitdowns." The article was written by Harrison E. Salisbury, a well-known journalist who was also scheduled to speak at Birmingham-Southern's lecture series on April 19. The article outlined the "community of fear" that was shared by both blacks and whites in Birmingham and Salisbury detailed the student demonstrations that had occurred in the weeks prior (Salisbury 28). He described both the Reeves incident and the petition that was signed by BSC students before "painting a vivid picture of Bull Connor's viciousness" as Birmingham's Police Commissioner (Stanford 8). Salisbury quoted some of Connor's famous aphorisms including, "Damn the law - down here we make our own law" and "White and Negro are not to segregate together" (Salisbury 28).

Needless to say, Connor was not impressed with the article. According to Stanford, Connor "secured an arrest warrant for Harrison Salisbury, to be exercised whenever the famous reporter set his foot in Jefferson County" (Stanford 9). This meant, among other things, that Salisbury would not be able to speak at the lecture series on April 19. Though Salisbury did secure a replacement speaker, Bull Connor succeeded in mastering control over many events within the city.

The next few years seemed to bring Birmingham-Southern less publicity, especially once President Stanford left his office and was replaced by Dr. Howard Phillips. However, one student changed that trend. On April 24, 1963, Marti Turnipseed, then a sophomore at the College, independently attended a lunch counter sit-in in downtown

Birmingham after participating the day before in a civil rights rally in which Martin Luther King had spoken. Reverend Noel Koestline, then a freshman, recalled the incident vividly in an interview on April 22, 1997, almost thirty-four years later: "Marti came back from the rally and decided that she wanted to be part of the sit-in. So she called her parents and got their support to do it. She asked Barbara [McBride] and I if we wanted to go, but we both decided it wasn't the right thing for us to do at the time." Ms. Turnipseed attended the sit-in and was spotted by a local who phoned the administration of the College to inform them. Koestline continued, "There were eyes all over the city. Someone must have recognized Marti as a 'Southern student and turned her in." Dean Cecil Abernethy clarified the details for *The Hilltop News*. He wrote, "On Wednesday, April 24, shortly after noon, the College received several calls from town that one of our students was in personal danger because of considerable mass reaction to her sitting-in at a local lunch counter" ("Dean Abernethy" 4).

When Turnipseed returned to the campus, she, Koestline, and McBride were called into the Dean's office. "They talked to us all at once and then one at a time," Koestline recalls. "We made our speech about how the school ought to be making a stand. They basically said, 'Don't do anything public to embarrass the school.' I felt like they made us out to look like we were trying to undermine 'this fine institution.'" By the next day, Marti Turnipseed had left the college. "The administration asked her to leave for a year and they put Barbara and I on social probation. Marti just disap-

peared. She went to Millsaps College for that next year [of Fall 1963 through Spring 1964] and she came back in the Fall of 1964 as a senior," Koestline remarked. Students, faculty, and staff reacted to Turnipseed's suspension with confusion and anger. In a letter to the editor of *The Hilltop News*, Koestline wrote the following:

> Maybe (one student) was too good a student. Maybe she learned her lessons in religion, sociology, anthropology, and ethics all too well. When (she) participated in a lunch counter sit-in, she said, "We must not isolate ourselves on a hilltop. We can't center upon self until we reach twenty-one, or graduate, or go into business. We have our part to play now." Because she was convinced of her responsibility, she isn't here, this week, but we don't care because we are concerned with our arthropods and metaphysical poets and May Day celebrations which fill our minds and save us from worrying about pressing irritations like people, God, and social responsibility. (Letter 4)

Jon Brock, a 1963 graduate of the College, remembers his shock at finding out that Turnipseed had been expelled for a year: "Everything that I heard about the incident came form verbal sources. I had the impression that the administration insisted that we stay out of the movement." However, after hearing about Turnipseed's actions, Brock did some of his own investigating. He remembers:

> The next day, I went downtown to see for myself. I watched the

marchers as they walked along towards the Sixteenth Street Baptist Church. I was across the street at Kelly Ingram Park, just observing. I remember realizing that I was the only white person in the area that was not a policeman or a fireman. And yet, I was completely without fear. And I really think this absence of fear is worth mentioning. It proved to me that the Civil Rights Movement was an act of moral conviction and not of force. (Brock)

In another letter to the editor, William and Trudy Myer, professors of French and Chemistry respectively, expressed their concern about Turnipseed's case. They wrote, "We want to tell our friends among the students and faculty of our concern about the circumstances of a student's leaving the college. We feel that a more open discussion of the racial problem is needed right here on our own campus, and hope that some policy may be developed to help us all in a time of serious change" (Myer 4). In response to this need for communication about Turnipseed's expulsion, Dean Abernethy called a faculty meeting for May 13, 1963, "to explore the situation of the college in the current community unrest." The faculty forum, to be chaired by Dr. O. C. Weaver, would discuss the "handling of the involvement of two students in the current racial demonstrations" (Faculty 2).

In a late April convocation, Dean Abernethy addressed the role that he wished Birmingham-Southern to take in the surrounding community. He began by introducing the "revolution" as a legal one in which litigation by the courts is necessary.

He then said:

> The city is entitled, I think, to work out its own destiny in this peaceful and moderate way. This is also the position of the college as an institution of this city. If any individual student of the college feels that he must take another position [thereby supporting anything other than a strictly legal fight] then he must do so as an individual citizen. And it is not possible for you to do this while you are a member of this institution. By electing to come to this college, you inevitably assumed the responsibility of representing the college. . . .As members of the institution, you must abide by its regulations and you must obey the laws and injunctions of this community. Your failure to do so requires us to discipline you. Devote yourself to the central business of this college, while we wait in lightened tolerance and sympathy for this city to work out its crucial and agonizing problem," ("Dean Abernethy" 4)

This speech typified the moderate's views of "let time take its course" which Martin Luther King responded to in his book *Why We Can't Wait*. King wrote: "I have almost reached the regrettable conclusion that the Negro's great stumbling block in his stride toward freedom is not the White Citizen's Councilor or the Ku Klux Klanner, but the white moderate who is more devoted to 'order' than to justice; who prefers a negative peace which is the absence of tension to a positive peace which is the presence of justice. . ." (84).

In fact, Abernethy's speech, which was later reprinted in *The Hilltop News*, spurred an array of reactions from students. Several students interviewed by *The Hilltop News* reacted positively to the administration's position. Bob Patterson was quoted as saying, "I can only commend the administration's prompt uprooting of the recent controversy." Another student, Jeanette Poole Ward, commented, " You can't run a college without financial support...in this locality and you cannot receive much support...if you permit the college to be in any way associated with desegregation." Dean Miller agreed, saying, " I . . . think that the administration did the best it could with an extremely touchy and less than pleasant situation" ("Dean's Speech" 5).

However, two of the students polled took different views on Dean Abernethy's speech. John Lindblom said, "each student should have the right to pursue his individual beliefs. I wonder if the same action would have been taken by the administration if a student participated in an anti-integration demonstration, which would seem to reflect the majority opinion of Birmingham." Dwight Isbell noted, " I don't see how this college can hope to gain national esteem so long as it maintains a bigoted and provincial stand on racial discrimination. I suspect the school will loose [*sic*] more than it will gain by its present policy of rationalized timidity" ("Dean's Speech" 5).

The following semester, Fall of 1963, Dr. Phillips gave yet another speech on the subject of the responsibilities of Birmingham-Southern students. He said:

> If the conscience, the zeal or the obsession of a member of the BSC family should lead him to prefer the egotistic heroics of the immature or of the self-seeking in contrast to the commendable restraint, self-discipline, and cooperation with those who have the responsibility for providing a remedy for our troubles, he should, following this announcement of policy, remove himself openly and officially from association with Birmingham-Southern College. Today this College is fighting hard for survival. We do not need any rocking of the boat." ("Dr. Phillips" 2)

With this as the stand that the Birmingham-Southern administration took on the college's role in the Civil Rights Movement of the 1960s, it is no wonder that an overwhelming majority of the student body and faculty felt no responsibility to participate physically or intellectually in the movement. Jon Brock recalls that the subjects of segregation and race relations were rarely, if ever, mentioned in class discussions or in less formal discussions between students. The majority of the talk centered around how to interpret the news in local papers. "I remember," Brock notes, "having a conversation with some of my neighbors on the hall about having to read between the lines to get the 'real story.'" Koestline recalls that "people just wouldn't talk about it. Some of the faculty was trying to keep the support of the students without getting into trouble by the administration."

A student by the name of Bill Mathews wrote an article in *The Hilltop News* called "Students, 'Southern, and Civil Rights." In

it, Mathews challenged the College's reputation as a liberal and open-minded institution. He writes, "It would appear that a college intent upon striving for excellence would offer to its students every opportunity to learn from contemporary situations. 'Southern, on the other hand, has done little or nothing in the way of trying to approach the question of civil rights on any level-even on the level of academic curiosity!" Mathews criticizes the lack of initiative on the part of both students and faculty to become educated. Although he seemed to understand the difficult position that the administration faced when deciding on a stance in the Movement, he says, "The college, in short, does not have to take a firm stand on the segregation-integration issue in order to recognize the fact that the Negro civil rights movement is presently a force that is changing the future of the nation. It is time for the whole college community to take at least an academic, if not a personal, interest in the Negro revolution" (Mathews 2).

Charles E. Entrekin, Jr., had a similar perspective, however his criticisms, voiced in a December 13, 1963 letter to the editor, were aimed more toward the student body than toward the administration. Entrekin criticized the fact that the school did not supply the students with any "intellectual challenge to which we could respond," but he makes a much larger point following this. "The amazing thing to me," Entrekin observes, "is not the vague restrictions handed down by the school, but rather the pervasive apathy with which the students have accepted them. No one is willing to attack or support the school's position" (Entrekin 2).

The 1964 issue of *Southern Accent*, Birmingham-Southern's annual, addressed this apathy in its introduction. Amid photographs of firemen rescuing a black neighborhood from arson are very honest words of acknowledgement that the student body did not play its part. The introduction begins by stating its purpose in the annual: "to impress you with the single historical fact of having lived in Birmingham during the past year" and to "make you recall how things in this town and nation looked to you in that year." The introduction goes on to ask the students to "remember, too, how deeply you were touched and untouched by it all;...and remember how, during Birmingham's slow crucifixion, you went to class and took tests and sat in the cafeteria drinking your iced tea" (Southern Accent 3). Koestline recalls how that passage encompassed exactly how she felt about the actions of the student body on the whole. "We were all too absorbed in ourselves and our little world to care," she said.

It seems as though, through this acknowledgment of apathy, the students became more aware of the community's strife. The September 20, 1963, issue of *The Hilltop News* included a small, four paragraph insert on the Student Government Association's views on downtown violence. Probably in response to the September 15 bombing of the Sixteenth Street Baptist Church, SGA passed a resolution condemning the "recent acts of violence in Birmingham" (SGA 1). The college also witnessed major changes in 1965 when the first black student, Ulysses Bennett, was given per-

mission to register in the fall semester. Bennett, a transfer from Morehouse College in Atlanta, came to Birmingham for a better education despite the intimidating racial climate of the time. He recalls his two years at 'Southern to be very positive, making friends with students and professors alike. He remembered only one instance of blatant racism when another student "walked right up to me and blew smoke in my face." Bennett was a member of a business fraternity and attended a few parties at the school. "I was a commuter," he admits, "and that may have shielded me." Bennett felt no discrimination from the faculty and actually remembers overwhelming support from some of his professors, including Dr. Gossett. "One thing that I am now very impressed with is the fact that BSC had the choice to move from the area and it chose to stay. When so many chose to flee, 'Southern was given the options of fight, flight, or compromise, and they fought. That alone forced a level of involvement in the city." Ulysses Bennett was the first black graduate of the college, when in 1967 he received his degree in Business Administration.

Koestline recalled Bennett's registration.

"He had a lot of guts coming to Birmingham-Southern in 1965. My group of friends was the group that took Ulysses in when he first got here." When asked about the racism that Bennett found so little of, Koestline responded that there was probably a lot more that he may not have come in contact with, being a commuter.

The integration of Birmingham-Southern was a large step for the college considering the racial climate of the city, however, it was well overdue. While even in 1997 BSC still needs some work on increasing the racial diversity of the student body, the past few years have put the issue on the College's priority list. Who knows what would have come of Birmingham-Southern were it not for students like Thomas Reeves, who confronted the issues of segregation head on, and Marti Turnipseed, who dared to challenge a conformist administration in the face of severe disciplinary action? These students became symbols for what the Civil Rights Movement aimed to become: a nonviolent struggle that challenged the unfair social order, no matter what the consequences, in order to succeed in gaining the equality that African Americans of this country worked so hard to achieve.

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The Tacoma Narrows Bridge Disaster: The Linear Harmonic, Piecewise Differential Equation

by Sissy McClung, DeAnn Miller, And John Johnson

The Tacoma Narrows Bridge at Puget Sound in Washington, a $6,400,000 project, began in January of 1939 and was completed and opened to traffic on July 1, 1940. The ill-fated bridge stood only five months before it collapsed on November 7, 1940. The collapse should not have been a surprise, since the bridge was nicknamed "Galloping Gertie" for its continuous oscillatory motions that began the day it was opened to traffic. The Tacoma Narrows Bridge was deemed safe even up to the hours of its failure. In fact, the bridge was believed to be so safe that officials were planning on canceling the insurance policy after another week. The shocking characteristics of the bridge made it popular to local drivers, increasing the traffic on the toll bridge, and making it a popular tourist attraction.

When the Tacoma Narrows Bridge was constructed, fifty years had passed since the last suspension bridge had collapsed. Perhaps the engineers were overly confident of the bridge's stability because of the recent success of similar bridges. However, the noteworthy number of suspension bridges which had collapsed is surprising and should have raised suspicion in the minds of the engineers and controllers when they first observed the galloping motion.

Traditionally, the collapse of the bridge was described with and blamed on conventional physical and linear principles. Such simplified descriptions provided an easy explanation for the collapse. "The noted engineer von Karmman was asked to determine the cause of the collapse. He and his co-authors claimed that the wind blowing perpendicularly across the roadway separated into vortices (wind swirls) alternately above and below the roadbed, thereby setting up a vertical force acting on the bridge. It was this force that caused the oscillations" (Zill, 192-193 addendum). Thus, from the date of its collapse, wind and the vortices alone have most often been blamed for the

tragedy. The general principle was simple; the collapse was caused by a resonance effect. At the time of the collapse, it seemed that the most widely and commonly accepted theories all gave credit to this effect. Each presents a slightly different view of the role of design and wind factors in the collapse.

Why did the Tacoma Narrows Bridge Collapse? (Six Theories)

It is very improbable that resonance with alternating vortices plays an important role in the oscillations of suspension bridges…It seems that it is more correct to say that the vortex formation and frequency is determined by the oscillation of the structure than that the oscillatory motion is induced by the vortex formation. *A Report to the Honorable John M. Carmody, Administrator, Federal Works Agency, Washington, D. C. March 28, 1941.*

The Primary cause of the collapse lies in the general proportions of the bridge…The ratio of the width of the bridge to the length of the main span was so much smaller and the vertical stiffness was so much less than those of previously constructed bridges that forces heretofore not considered became dominant. *Board of Investigation, Tacoma Narrows Bridge, L. J. Sverdrup, Chairman, June 26, 1941.*

Once any small undulation of the bridge is started, the resultant effect of a wind tends to cause the vertical undulations to build up. There is a tendency for the undulations to change to a twisting motion, until the torsional oscillations reach destructive proportions. **Bridges and Their Builders,** *D. Steinman and S. Watson, Putnam's Sons, N.Y., 1941.*

The experimental results described in a (1942) report indicated rather definitely that the motions were a result of vortex shedding. *University of Washington Engineering Experiment Station Bulletin No. 116, 1952.*

…Galloping Gertie tore itself to pieces, because of two characteristics: 1. It was a…very flexible structure standing in a wind ridden valley; 2. Its stiffening support was a solid girder, which combined with a solid floor, produced a cross section peculiarly vulnerable to aerodynamic effects. **Bridges and Men,** *J. Gies, Doubleday and Co., 1963.*

Aerodynamic instability was responsible for the failure of the Tacoma Narrows Bridge…caused by the periodic shedding of vortices on the leeward side of the structure, a vortex being shed first from the upper section and then the lower section. **Wind Forces on Buildings and Structures,** *E. Houghton and N. Carruthers, J. Wiley & Sons, N.Y. 1976.*"(Serway 352).

Every structure that has mass has a natural frequency, or number of vibrations per second. "If forces are exerted on that system at the right frequency and phase, sympathetic vibrations can be excited. Oscillating forces at the right frequency and phase can cause sympathetic vibrations of catastrophic proportions. The theories pro-

pose that the forces applied to the bridge by the wind were applied at a natural frequency of the bridge. Thus, the amplitude of the bridge's oscillations increased until the steel and concrete could no longer stand the stress"(Serway 353).

Although the stated theories have minor differences, it seems that all who investigated the collapse blamed it on the fundamental aerodynamic instability of the bridge. Therefore, the theories propose that the natural frequency of the Tacoma Narrows Bridge must have been matched to cause such behavior in the inherently weak but large bridge. By extension many investigators came to the conclusion that wind does not blow in significant pulses to match a building's natural frequency. Also, the forces applied on the bridge "were acting vertically—transverse to the direction of the wind. The wind was blowing across the bridge (from side to side), while the forces on the bridge were acting vertically. These oscillating vertical forces can be explained by a concept called vortex shedding" (Serway 353). Vortex shedding occurs when there is an obstacle in a stream of air, or liquid; then a vortex is formed behind the obstacle. The vortices flow off at a definite periodicity, which depends on the shape and dimension of the structure as well as on the velocity of the stream. As a result of the vortices separating alternately from either side of the obstacle, the obstacle is acted upon by a periodic force perpendicular in the direction of the stream, and of magnitude.

Fowt

The coefficient **F** depends on the shape of the structure. The poorer the streamlining of the structure, the larger the coefficient **F**, and hence the amplitude of the force (Braun 251). Engineers believed that the poor wind resistance of the bridge caused its failure, along with the fact that the bridge was suspended in a very windy location. Many mathematicians believed that the torsional standing waves (due to the constant vortex shedding) were additive and constantly increasing, drwaing them closer and closer to the natural frequency of the bridge, increasing the risk of disaster. The same phenomenon is more practically applied to soldiers marching across a bridge, where resonance *is* to blame for collapse. For this reason soldiers "break cadence when crossing a bridge"(Braun 252).

Further explanation of these theories can be obtained using Newton's second law for translation and Newton's law for rotation, respectively

$$May = -k(y1 + y2)$$
$$Ia = -(kW/2)(y2 - y1)$$

where the bridge is modeled as being suspended by springs (the vertical cables attached to the roadbed). **M** represents the mass per unit length of the bridge and **k** represents the spring constant of the vertical cables, the **y**'s in the equation are the distance the sides of the bridge are moving, and **W** is the width of the bridge. An angle approximation is made using the width of the bridge and the distance the waves are moving the sides of the bridge to obtain the equation described earlier.

The above equations take into account the twisting motion of the bridge. The equation also allows that the values of **y** will be of equal magnitude but opposite in direction in order to obtain the equation for the

frequency of the motion in the bridge.

$$w=(kW^2)/(2MR^2)$$

"...the values appropriate for this analysis are: mass per unit length (M) = 4300 kg/m, width of the bridge (W)= 12m, radius of gyration of the bridge (R)= 4.8m, effective spring constant (k) = 1500 N/m. These numerical values result in the vertical normal mode frequency (w) of 8 cycles per minute and the torsional motion of 10 cycles per minute. The approximate equality of these two frequencies played an important role in the fate of the Tacoma Narrows Bridge"(Serway 355).

The theories which use this explanation leave much to assumption. Recent research by A.C. Lazer and P. J. McKenna tries to tear down previous assumptions and formulate a new hypothesis that could better model the actual motion of the bridge.

For many years the destructive motion of the Tacoma Narrows Bridge was described as a linear harmonic oscillator acted upon by the outside force of vortices created by wind. However, Lazer and McKenna began to investigate this model and found some serious discrepancy between the motion of the bridge and the model used to describe it. Engineers and mathematicians at the time of the collapse modeled the destructive movements of the bridge to that of a harmonic oscillator equation. The model made logical sense because vertical cables attached to and supported the roadbed of the bridge. The roadbed was seen as the mass of the system and the vertical cables attached to the roadbed were the springs in the linear harmonic oscillator (Blanchard, et al. 440-441). The harmonic oscillator equation models a physical sys-

tem, which contains a quantity, which is subject both to a restoring force and to a damping force. The restoring force is proportional to displacement of the mass and the damping force is proportional to velocity or motion of the mass.

Spring or restoring force:

ksy

Damping force:

Kd(dy/dt)

In the bridge model, the spring force was proposed as the tension or restorative force of the vertical cables attached to the bridge and the damping force was considered the resistance of the structure to motion (its flexibility). The old equation also contained an external force of vortices that were created by the perpendicular force of the wind on the roadbed. In the model of a forced harmonic oscillator the "external" force can be any function. One such force could be a sinusoidal force with a period; therefore, the force could alternately push and pull the mass, or roadbed in this case, back and forth. This sinusoidal force is often used to describe the force of the wind or vortices on the roadbed.

The old theory is based on the concept that the alternating vortices, which were created by the force of the wind, increase in force and size until their force frequency equals the natural frequency of the roadbed. This phenomenon is called resonance. Resonance describes any periodic forcing of a harmonic oscillator equation whose frequency is equal to the natural frequency of the harmonic oscillator. The proponents of the harmonic oscillator system used resonance to describe the large, destructive oscillations of the bridge.

Resonance occurs in the harmonic oscillator model when the wind has a forcing frequency that is equal to the natural frequency of the bridge. "At the resonant frequency the amplitude of the solutions does not reach a maximum but continues to grow for all t."(Blanchard, et al. 428). For this reason, von Karmman and his associates hypothesized that when resonance occurred between the vortices and the bridge, the amplitude of the oscillations of the bridge grew large even when the force of the wind was moderate.

One of the problems with this theory is resonance can create a large amplitude in the motion of solutions but if damping is present, then solutions do not tend to infinity (Blanchard, et al. 432). The old model included damping parameters; therefore, under this model the oscillations of the bridge would exhibit large amplitudes but the oscillations would eventually cease. This type of motion does not coincide with the motion exhibited by the bridge on the day of its collapse.

Another problem with the linear harmonic oscillator model was the theory that resonance could or did occur between the frequency of the bridge and the frequency of wind. The resonance hypothesis assumes that the forcing frequency of the wind must equal the natural frequency of the bridge. Wind is a very unpredictable phenomenon. It is very unlikely that the frequency of the wind will exactly equal the frequency of the bridge. These and other problems lead Lazer and McKenna to discover that the linear harmonic oscillator model does not accurately portray the motion of the bridge. Even the engineers and mathematicians who

proposed the model, von Karmman, Othmar H. Amann, and Glenn B. Woodruff, said that it is very "improbable" that resonance with alternating vortices plays an important role in the oscillation of suspension bridges (Lazer and McKenna 538).

Not only is the assumption that resonance causes the large oscillating motions of the bridge wrong, but also the whole idea of the bridge functioning as a linear harmonic oscillator is incorrect. The old theory states that the cables act like springs when they are stretched. However, when the roadbed oscillates upward past the equilibrium point of the bridge the vertical cables do not provide the restoring force found in a linear oscillating system. Instead, the cables are slack and do not provided a force to push the roadbed back to its resting position. Lazer and McKenna take into account that the cables only act similar to a harmonic oscillator when they are pulled downward, by using a piecewise function to describe the position of the bridge and the spring constant. The new equation is as follows:

$$d2y/dt2 + ady/dt + by + c(y) = -g$$

This model only considers one variable for the position of the bridge, and assumes that the bridge only oscillates in the vertical direction. Tortional motion is not taken into account in this model; however, Lazer and McKenna do suggests some models for the torsional motion. In the equation:

y(t) denotes vertical position of the center of the bridge (feet).

y=0 position where cables are taut but not stretched.

y<0 when cables stretched; **y>0** when cables are slack

Several forces act on the center of the

bridge: gravity, the force provided by the material of the bridge, the restoring force of the cable, and a small damping force. Most of these forces, with the exception of the piecewise function describing the restoring force of the cable, were taken into account in the old equation. In contrast, the new equation illustrates that the cables provide a force, which pulls the bridge upward. The upward force is proportional to **y** when **y<0**, and the cables provide no force when **y>0**. This force is describe by the following function:

$$c(y)=gy \text{ if } y<0$$
$$\text{if } y>0$$

Therefore, the bridge does not act like a linear harmonic oscillator when **y>0**. Gravity is a constant force acting in the negative **y** direction, and described by:

$$g$$

The material of the roadbed also provides a restorative force when **y** is not equal to zero. This force is described by :

$$by$$

The vertical motion of the bridge is damped somewhat by the structure itself and is proportional to dy/dt. This damping is represented by the following term:

$$a(dy/dt)$$

The damping is assumed to be small because suspension bridges are relatively flexible. *Convert the system to a linear equation in order to solve:*

$$dy/dt=v$$
$$dv/dt=-by-c(y)-av-g.$$

Next combine the **by** and **c(y)** terms to yield the function **h(y)**. **h(y)** is piecewise function described as:

$$h(y)=ay \text{ if } y<0$$
$$by \text{ if } y>=0$$

where **a= b + g** and **b= b**.

This system has an equilibrium point that can be seen in the phase plane of the solution. When the a=17, b=13, a=0.01, and g=10 then an equilibrium is seen at the point (y,v)=(-10/17,0) (Figure 1). The phase plane reveals a spiral sink solution, and an equilibrium point below y=0. The equilibrium point is expected to be negative because of the force of gravity on the bridge, and the spiral sink results from the slight damping exhibited on the bridge. Up until this point the solution closely resembles the solution one would expect of a linear harmonic oscillator; nonetheless, the "external" forcing term has not yet been added to the equation. Without the external force of wind, the old model does hold true and the bridge does behave in a linear harmonic oscillator fashion.

The External Force of the Wind

A gust wind is random and unpredictable; therefore, trying to model the behavior of wind as an external force is difficult. In this model, wind is assumed to have a constant speed and direction. Even when this assumption holds true, the effects of a constant wind are somewhat unpredictable. As mentioned previously, vortices (swirls of wind) occur above and below roadbed. These vortices break off when they become large enough. When vortices break off, the force causes the bridge to rebound. Therefore, a constant wind can cause the bridge to bounce. In order to model turbulent winds in the equation, the amplitude is given a range because turbulent winds would rarely act with constant amplitude.

$$lsin(mt)$$

where **l** is the amplitude of the wind and **m/2p** is the frequency

The new equation with the external force of wind is

$$dy/dt=v$$

$$dv/dt=-h(y) - av - g + lsin (mt)$$

This equation illustrates that a wind could be very strong but only cause a slight initial displacement of the bridge in the negative **y** direction. When this occurs, the bridge does not go above the equilibrium point of the roadbed where y=0. In this situation the motion of the bridge does behave like a harmonic oscillator. The amplitudes of the wave-like motions increase to a point and then decrease to zero. This motion occurs because of the damping parameters present such as the flexibility of the roadbed and the restorative force of the cables when y<0. Figure 2 illustrates the motion of the bridge with a wind of slight amplitude and frequency and initial conditions equal to those of the equilibrium position.

However, a much different graph occurs when the initial motion of the bridge, which is described by **v**, is increased. Figure 3 shows the motion of the bridge for the initial conditions (-10/17,10). The graph illustrates that if the initial displacement of the bridge is large and above y=0, then large oscillations will occur which do stop. Consequently, a large initial displacement can occur with a very moderate wind. The oscillations of the roadbed in this situation are very large in comparison with the oscillation in Figure 2 and the motion of the bridge does not end.

Essentially, the model proposed by Lazer and McKenna states that when the solution does not go above y=0, it behaves just like a linear harmonic oscillator. This means that the bridge will begin to oscillate and then the movement will begin to decrease as long as the initial motion of the bridge is not above y=0. The oscillations will die out because of the damping factor and the force of the bridge material. However, when the solution goes above y=0, a dramatically different behavior is seen. When a gust from even a mild wind causes the initial displacement of the bridge to be large, then the bridge will begin to oscillate with large amplitude that does not subside. A simple harmonic oscillator cannot describe this motion. The nonlinear behavior, which oc curs when the initial positive displacement of the bridge is large, was the behavior that caused the destruction of the Tacoma Narrows Bridge.

Current Problems with the model:

In this equation the bridge is only considered in one dimension, whereas the actual bridge has a length, width, and height. The width of the bridge could explain the torsional motions of the bridge before it collapsed.

Furthermore, the bridge was assumed to have oscillated in one piece when the bridge can oscillate in multiple pieces. Two oscillating pieces were shown on the video which recorded the bridge's destruction.

If an equation is to model a bridge which exhibited two different positions of oscillations, another independent variable should be added. This addition would result in a partial differential equation.

The Structural Failure of the Tacoma Narrows Bridge

The failure of the Tacoma Narrows Bridge was the combined result of many structural misconceptions and underestimates. First of all, the eight foot deep stiffening girders, which were steel beams in the roadbed running perpendicular to length of the road, were shallow in relation to span. Because of the girder's proportional shallowness the Tacoma Narrows was three times more flexible than the Golden Gate Bridge or the George Washington Bridge (Levy and Salvadori 111). The aforementioned bridges were the only two bridges that compared in length with the Tacoma Narrows at the time.

Not only were the girders shallow, but they were also less than half as stiff as the girders of the shorter Bronx Whitestone Bridge with which Galloping Gertie is often compared (Levy and Salvadori 117). The Bronx is the only modern bridge that has the plate girder stiffeners similar to the Tacoma. It is surmised that the Bronx was saved from the problems of the Tacoma because it is twice as heavy, twice as wide, and comparably stiffer (Levy and Salvadori 117).

Another structural problem stemmed from the narrowness of the roadway in comparison with the spans. The span or length of the bridge was very long when compared to the slenderness of the bridge (Levy and Salvadori 117). This slenderness made the bridge very weak and susceptible to torsion motion (Levy and Salvadori 117). By combining the narrowness of the roadbed with the absence of sufficient stiffening in the roadbed, the bridge invites longitudinal "galloping" (Levy and Salvadori 117).

Possible Solutions to the Structural Problems of the Tacoma Narrows Bridge

It seems that the weakness of the Tacoma stemmed from two causes: the shallowness of its stiffening girders, and the narrowness of its roadway in relation to the span length. Could the dangerous twisting and galloping motions of the bridge have been prevented? Some say yes, it was avoidable in many ways. First, the stiffening trusses should have been open to allow the wind a more free passage through their openings, a feature not present in the solid stiffening girders (Levy and Salvadori 119). These girders provided a substantial surface upon which the wind could act. By decreasing the surface area of the girders, the force of the wind on the bridge would be decreased. Second, the ratio of roadway width to span length should have been larger, which would make the twisting resistance of the span increase. Third the bending stiffness of the trusses or girders should have been increased to elevate the twisting resistance of the span (Levy and Salvadori 119). By increasing the resistance of the material, the **b** parameter in the new equation is increased thereby increasing the resistance of the bridge. Fourth, the bridge structure could have been dampened which would have prevented the indefinite progressive increase in magnitude of the aerodynamic oscillations (Levy and Salvadori 119). This dampening solution could be modeled in Lazer and McKenna's equation by increasing the a parameter for damping. And finally, the span oscillations should have been counteracted by means of a dynamic

damper, as was successfully done for the first time in 1990 in the Bronx Whitestone Bridge (Levy and Salvadori 119-120).

The new equation of Lazer and McKenna allows engineers or mathematicians to more accurately model various solutions proposed for the structure of a bridge, and construct and investigate the possible motion of the bridge with changed parameters.

The bridge that was built to replace the Tacoma consisted of many of the solutions previously mentioned. The addition of stiffening trusses 25ft deep and a box design for torsional stiffness increased dampening and resistance in the bridge; the new bridge was entirely aerodynamic, and it has been free of any problems (Levy and Salvadori 120).

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Figure Legends
Figure 1: The motion of the Tacoma Narrows Bridge without an external force.
Figure 2: The motion of the bridge when the initial displacement is small.
Figure 3: The bridge with a large initial displacement.
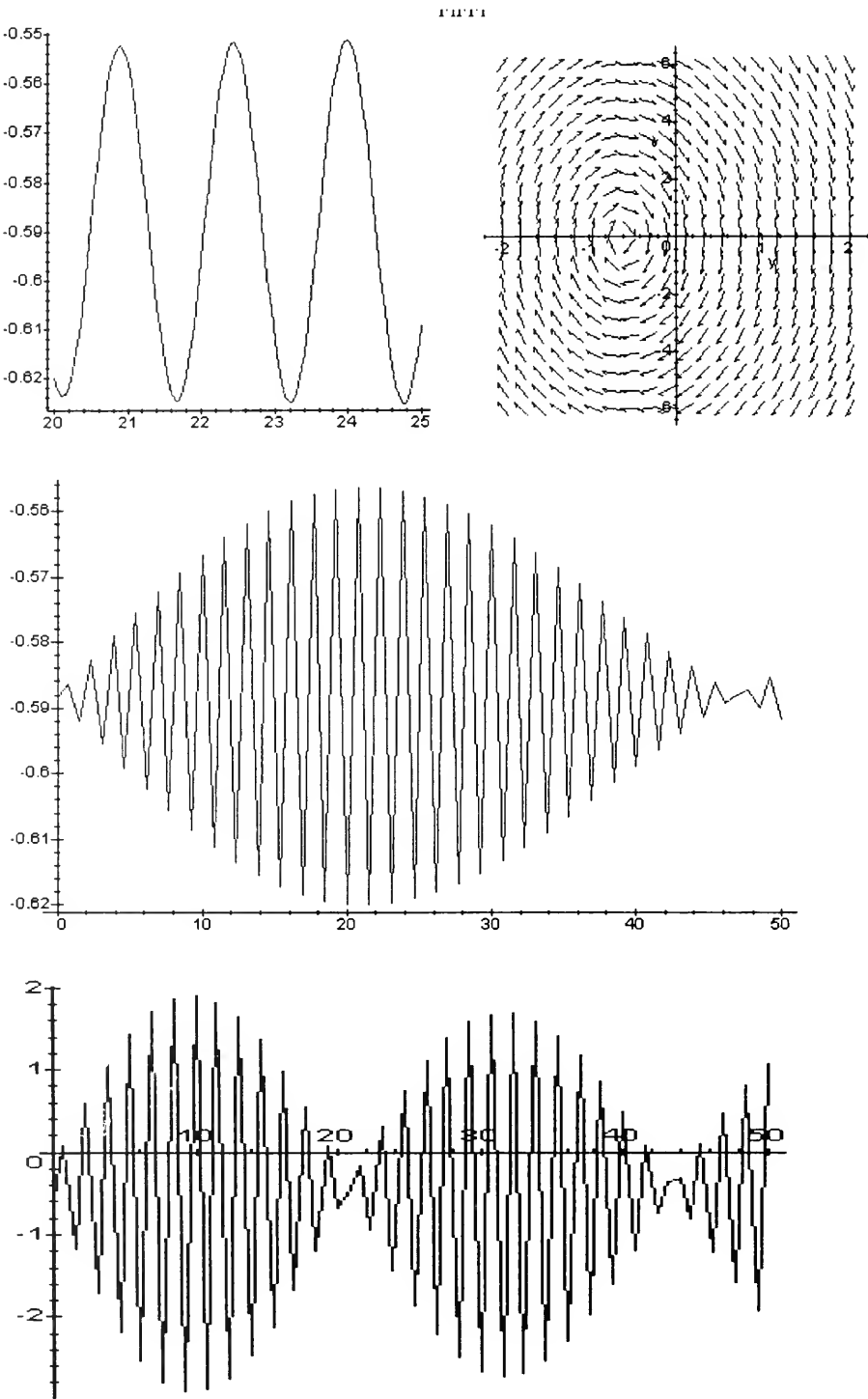
Can Today's Society Learn From Something That Happened "A Long Time Ago in a Galaxy Far, Far Away"?

by Jake Livingston

Robert Fulghum's "Everything I Need to Know I Learned in Kindergarten" offers guidelines to help the world become more considerate. Similarly, a parody entitled "Everything I've Ever Learned I Learned From Star Wars" enumerates bits of wisdom acquired from George Lucas's Star Wars Trilogy. While predominantly humorous in tone ("Sometimes it is smart to listen to little green Muppets"), the list also includes references to the inspirational facet of the Trilogy: "No matter how deeply one falls into darkness, there is always hope for redemption" (Craig). By clinging to such religious allusions and classical heroic archetypes, Lucas has succeeded in giving the world "a timeless fable that could demonstrate . . . the differences between right and wrong, good and evil, responsibility and shiftlessness" (Pollock 139).

Throughout the Trilogy's existence, Lucas's attempt to "return to more tradi-

tional values that [hold] a special appeal to our rootless society" (Pollock 139) has been ridiculed. Sam Schechner has accused the movies of being "utter folly: meaningless moral ramblings set in the exciting backdrop of space. All pace, no content. No soul, all action." Schechner substantiates his argument by pointing out that, in real life, the good guy is not necessarily the victor and that the line between good and evil is not always so easily discernible. He credits the movies, though, by acknowledging that "despite all that—or perhaps for all of it—I love them."

Judith Martin, in her review of *The Empire Strikes Back*, labeled it as a "junk movie," the cinematic equivalent of a candy bar. Her logic is simple:

> A chocolate bar is a marvelous sweet that does not need to pretend to be a chocolate soufflé; . . . blue jeans are a perfect garment that

shouldn't be compared with haute couture. There are times when you would much rather have a really good hot dog than any steak, but you can still recognize that one is junk food and the other isn't. She brands the Force as "a mishmash of current cultic fashions without any base in ideas." It is a fabrication that offers no apparent moral teachings or ethical guidance; it has no philosophical merit. "But then," she argues, "you don't go to junk movies for your philosophy or religion, do you?" (Martin).

There is no denying, though, that the Star Wars Trilogy "endures. . .splendidly," regardless of such criticism (Handy 74). The Trilogy probes the depths of the human soul and gives man a sort of mystical tangibility to his inner needs and desires. Lucas himself agrees with his critics in that his movies are a nonstop barrage of action and adventure: "'I like things fast,' he says. 'That's the way I am, personally'" (qtd. in Handy 74). Though in some ways the adventures of Luke Skywalker make "just an adrenaline-rush movie," Lucas wants his audience to realize that if *Star Wars* is simply that, "it wouldn't be here 20 years later. There are things going on that are more complicated and psychologically satisfying" (qtd. in Handy 74).

In *Star Wars : A New Hope*, the first installment of the Trilogy, the audience is introduced to a young farmboy named Luke Skywalker. In stark contrast to the "desolate" surroundings on his home planet of Tatooine where the saga begins, Luke finds himself responsible for blowing up the evil Galactic Empire's moon-sized armored space station with a pair of proton torpedoes by the end of the film. This journey from a poor farmer to a powerful member of the Rebel Alliance is filled with sometimes vague introductions to the vast mythological machinations of Lucas's mind, formed using a mold of classical heroic archetypes.

Lucas's modern day fairy tale relies heavily on the work of Dr. Joseph Campbell. Indeed, "Campbell's table of contents [of *The Hero With A Thousand Faces*] does almost read like a rough screenplay" of the film (Schechner). Though not initially intentional (Lucas once remarked, "It was very eerie because in reading *The Hero*, I began to realize that my first draft of Star Wars was following the classical motifs"), Lucas eventually adapted his screenplay to more closely model Campbell's age old attributes of heroism (Schechner). In the beginning, Lucas "went around in circles for a long time trying to come up with stories, and the script rambled all over and [he] ended up with hundreds of pages" (qtd. in Campbell, *The Hero's Journey* 180). After reading *The Hero*, however, he noticed that the archetypes contained within the pages would serve as an excellent plot structure, as it had served thousands of others for as many years. He goes so far as to say, "It's possible that if I had not run across him I would still be writing *Star Wars* today . . . he has become my Yoda" (qtd. in Campbell, *The Hero's Journey* 180).

The Hero states that "A blunder—apparently the merest chance—reveals an unsuspected world, and the individual is drawn into a relationship with forces that are not rightly understood" (Campbell, *The Hero*

51). In *A New Hope*, Skywalker is sold a dysfunctional robot (which Lucas called a "droid"), which forces him to trade it in for a replacement. This replacement droid *happens* to be R2-D2, who *happens* to have the "technical readout" to the Empire's deadly space station "inside [his] rusty innards" (ANH). This "blunder," as Campbell calls it, eventually lures Luke into the "unsuspected world" of the Rebel Alliance. R2-D2 leads Luke to an old hermit named Ben Kenobi, who calls Luke to join him in the Rebel's fight against the Empire. Kenobi serves as "a protective figure (often a little old crone or old man) who provides the adventurer with amulets against the dragon forces he is about to pass" (Campbell, *The Hero* 69). Here the "amulet" is Luke's "father's lightsaber," which proves to be the only tool "elegant" enough to topple the "dragon forces" of the Empire. But, again following Campbell's outline, the young hero Skywalker refuses his call to action: "I can't get involved! I've got work to do! It's not that I like the Empire. I hate it! But there's nothing I can do about it right now" (ANH). Luke returns home, though only to find his homestead annihilated and smoking, destroyed by the Empire. Then, through the thick cloud that was once his home, he sees the charred skeletons of his aunt and uncle. Again, correlating with the hero's quest, "tragedy often sets the story in motion" (Young).

Though not an integral part of the storyline, the Sandpeople of the Dune Sea region of Tatooine also parallel the adventure of the hero. A group of Sandpeople attacks Skywalker, knocking him unconscious and looting his vehicle. Campbell describes "an ogre that has been occasionally encountered among the scrubs and dunes . . . This creature is a hunter of men" and "is said to hunt in packs" (78).

A New Hope also dips into the inkwell of Lucas's religious messages, giving minute insights into a realm which is not fully discussed until *The Empire Strikes Back* and not fully understood until the final moments of *Return of the Jedi*. Kenobi introduces Luke to the Force, which he defines as "an energy field created by all living things. It surrounds us and penetrates us. It binds the galaxy together" (ANH). This "Force" forms the basis of religious belief in the Trilogy. As in this galaxy, there are those who see no practicality in religion. Han Solo, a smuggler and pirate, remarks to Luke, "Hokey religions and ancient weapons are no match for a good blaster at your side, kid" (ANH). He proceeds to give an explanation of why he is not a religious man:

> Kid, I've flown from one side of this galaxy to the other. I've seen a lot of strange stuff, but I've never seen anything to make me believe there's one all-powerful force controlling everything. There's no mystical energy field that controls my destiny. (ANH)

Such scenes in *A New Hope* provide an effective juxtaposition between believers and non-believers, and lay a solid groundwork for the further development of the Force and all of its intricacies later in the Trilogy.

There are also subtle references to Christianity in this film, exemplified by the characters having a limited freedom to choose their own path in life. The Force has a definite influence on the minds of characters

such as Luke Skywalker and Han Solo; it urges them to follow their destiny, yet allows them to make their own crucial decisions throughout the journey. As Leia said of Han, "He's got to follow his own path. No one can choose it for him" (ANH). However, as in Christianity, "the final decision is up to the person. God, too, a hundred steps away, will take ninety-nine steps towards us at any given moment, but that one last step has to be our own" (Wilson).

Thus, *A New Hope* provides a firm foundation on which Lucas is free to build his moral underpinnings. Though relatively few of his "traditional values" are brought to the forefront in the course of the film, Lucas sets for himself the paradigm of the hero's quest, which inevitably leads to enlightenment, redemption, and the triumph of good over evil.

The second installment of the Star Wars Trilogy is entitled *Star Wars : The Empire Strikes Back*. Here, the audience follows Luke Skywalker through his Jedi training with Yoda on the planet of Dagobah and his confrontation with Darth Vader at the mining colony of Bespin. Luke's experiences in this film continue to follow the hero's journey outlined by Campbell; and, here he is introduced to Yoda's religious philosophy, which is a conglomeration of Buddhism, Judeo-Christian principles, and Oriental convictions (Pollock 140).

When Luke crashes his X-Wing starship in the murky forested swamps of Dagobah, he wonders why he ever came. As being stuck in the "slimy mudhole" pushes Luke further into despair, a "helpful crone" enters his life (ESB). His name is Yoda. He is a "little fellow of the wood, some wizard, hermit, shepherd, or smith . . ." (Campbell, *The Hero* 72). Initially, Yoda refuses to teach Luke the ways of the Force, but he eventually looks past Luke's undesirable attributes of impatience and recklessness and agrees to train him as a Jedi.

Corresponding with the archetypal hero's journey, "often the mentor enters the story at a very advanced age" (Young). But what is Yoda's purpose? According to Campbell, "what such a figure represents is the benign, protecting power of destiny" (71). Yoda acts out this representation, educating Luke in the ways of controlling the Force and using it as an ally. "Only a fully trained Jedi Knight with the Force as his ally will conquer Vader and his Emperor," he says (ESB).

On this planet, Luke notices a cave entrance under a large tree, looks at it, and says that he feels "cold, death" (ESB). He asks Yoda what is in there. "Only what you take with you," he says. Luke picks up his blaster and lightsaber and starts into the cave, his curiosity now stronger than ever. "Your weapons...you will not need them," Yoda says as Luke descends into the dark. Hearing the Jedi Master but not believing his claim, Luke enters the cave ready to attack anything that comes his way. In the cave, he is surprised by a tangible apparition of Darth Vader; lightsabers clash. Luke, in a frightened aggression, decapitates Vader and realizes his failure when he sees his own face in the mask of Vader. Luke realizes that he has the potential to become his father. The hero that Campbell writes of faces the same sort of experience:

> . . . if anyone . . . undertakes for
> himself the perilous journey into the

darkness by descending, either intentionally or unintentionally, into the crooked lanes of his own spiritual labyrinth, he soon finds himself in a landscape of symbolical figures (any one of which may swallow him). . . . (Campbell, *The Hero* 101)

The cave here is Luke's "spiritual labyrinth," and the "symbolical figure" of Darth Vader "swallows him" by showing him that the dark side poses a larger threat than he once believed.

Later, during one of his training exercises, Luke has a horrible vision wherein his friends Han Solo and Princess Leia are subjected to terrible pain and suffering. Against Yoda's wishes, he leaves Dagobah an immature Jedi Knight to save his friends. When Luke leaves, "the wise old teacher or spirit [has] give[n] the hero something that is necessary for the quest," though he does not yet know fully how to use these lessons in his best interests (Young).

From Dagobah, Luke eventually finds himself engaged in a lightsaber duel with Darth Vader on Bespin. During this duel, Luke is "covertly aided by the advice, amulets, and secret agents of the supernatural helper" most notably the Force and his lightsaber (Campbell, *The Hero* 97). Despite such aid, Luke's incomplete Jedi training has left him vulnerable. He was overconfident in the battle: he says to Vader, "You'll find I'm full of surprises" (ESB). Because he could not yet control his emotions nor use the Force as the ally Yoda had taught, Luke finds his hand dismembered by Vader's lightsaber and realizes that he is left with no other choice but to flee. Luke's predicament here is congruent with that of all mythical heroes: "It isn't an individual's skill or strength alone, that will get him or her through the situation" (Young). Skywalker failed to realize this: "There is much in these stories about humbling our arrogance" (Young).

Lucas's religious themes surface in this episode of the Trilogy, most noticeably on Yoda's planet of Dagobah. The teachings of this little old hermit have characteristics of practically every major religion, including "Christianity, Buddhism, Judaism, and Islam" (Pollock 139). Aspects of Hinduism have also been ascribed to the Force.

The specifics of Christianity do not apply to the nature of the Force, but general themes of the religion are present in Yoda's teachings. Pastor John D. Kautz puts it simply: "Good and evil; sacrificial death; dark and light; and of course, 'May the FORCE be with you', all suggest something more than a kid's matinee." A Christian movie review web page notes further comparisons: "That which is associated with the Dark Side (murder, oppression, destruction, evil, etc.) is that which the Bible has always associated with the devil" ("Star Wars: Special Edition"). This reviewer also notes, as do many Christian viewers of the films, that "what some of us here find challenging (if not downright blasphemous) is the idea that a discipline completely foreign to Chrisianity (Zen, in this case) also knows these truths . . ." (Star Wars: Special Edition). Such a statement attests the universality of Lucas's religious and moral messages.

More closely analogous to the ideas of the Force are non-Western religions. Bud-

dhism, for example, involves a "seeker" searching for a psychological "tree in the middle of the universe . . . which is called the immovable spot" (Campbell, *Transformations* 116). This spot is simply defined as "the spot that is not moved by desire and fear" (Campbell, *Transformations* 116). Yoda characterizes the dark side of the Force as "Anger. . .fear. . .aggression." The light side of the Force however, involves being "calm, at peace. Passive" (ESB). The light side of the Force, then, is a sort of "immovable spot" congruent to that of Buddhist philosophy. Yoda also tells Luke that the Force "should be used for knowledge and defense, not greed and aggression. The Force demands optimism, not the pessimism that characterizes Luke," teachings that further parallel those of Buddhism (Pollock 140).

Hinduism also figures very prominently in Luke's training. The swampy, forest setting itself plays into Hindu practices. According to Rajan Rajbhandari's essay entitled "Hinduism and Star Wars," "This is very like Hindu's Janoi (Gujarati), where young males run to the forest in search of the old, wise yogi, who would provide great knowledge." He also contends that the definition of the Force is related to "the Hindu concept of the One" (Rajbhandari). He adds, "In Hinduism it is said that we are all part of the One, just like what Yoda said about the Force" (Rajbhandari). Furthermore, Yoda talks about the illusion of vision. Moving a rock with the Force and moving an X-Wing are "only different in your mind," he says (ESB). Even in "A New Hope," Ben Kenobi hints at this ideal by telling Luke that "Your eyes can deceive you. Don't trust them." Rajbhandari relates this lesson to Hinduism by saying that "This . . . illustrates the Hindu concept that life is an illusion (or Maya)." Luke's vision of Han and Leia's peril adds additional evidence of Yoda's Hindu model, as Yoda tries to convince Luke to stay and finish his training instead of spontaneously running off to help his friends. Rajbhandari states, "This exemplifies the Hindu concept of duty over family," a concept which is shown in such Hindu tales as "the Bhagavad-Gita, where Lord Krishna tells Arjun to fight his cousins, despite his feelings for them, because it is his duty" (Rajbhandari).

The Empire Strikes Back, then, contains the Trilogy's first blatant references to the exact nature of the Force and the discipline involved in becoming a Jedi Knight. The film also incorporates several of Lucas's moral ideals, ones which are thus passed on to his audience. He stresses the qualities of patience and self-control, along with a glimpse into the corrupting nature of evil. He speaks of an optimistic, tranquil existence, one free of anger, aggression, and fear. With such basic attributes of the hero now placed in the forefront, Lucas has prepared a pedestal on which he can place a final clash between good and evil, along with the mythological concept of "atonement with the father" (Campbell, *The Hero* 126).

The final film of the Trilogy is titled *Star Wars : Return of the Jedi*. The audience once again follows the heroic journey of Luke Skywalker as he returns to Dagobah to receive final words of wisdom from Yoda and Ben Kenobi. In these scenes, Luke is presented with his inevitable destiny—he must face Darth Vader again. Though Luke

is better prepared for the upcoming battle than he was at Bespin, he knows now that Vader is his father, and the notion of killing him unsettles Luke. Skywalker eventually finds himself in the presence of Vader and Emperor Palpatine by the end of the film; and, in a timeless clash between good and evil, the nefarious Galactic Empire is toppled and Darth Vader ultimately dies a redeemed man, spiritually reunited with his children (ROTJ).

When Luke returns to Dagobah to complete his training as a Jedi Knight, he finds out that there is one task left for him to accomplish before he can be considered a true Jedi. This one thing, Yoda tells him, is "Vader. You must confront Vader. Then, only then, a Jedi will you be. And confront him you will" (ROTJ). The great Jedi Master dies soon thereafter, leaving Luke to ponder whether or not to take his father's life. He is faced with a dilemma that has plagued heroes of every kind for centuries:

> The problem of the hero going to meet the father is to open his soul beyond terror to such a degree that he will be ripe to understand how the sickening and insane tragedies of this vast and ruthless cosmos are completely validated in the majesty of Being. (Campbell, *The Hero* 147)

After Yoda's death, Luke talks to Ben Kenobi about the future of the Jedi Knights and his destiny. He learns that Princess Leia Organa of Alderaan is actually his twin sister separated at birth, and that she is as strong in the Force as he is. The two Skywalkers, Kenobi says, are the last hope for the Jedi. Luke realizes Leia's impor-

tance and the necessity that she be protected. The conversation then inevitably focuses on Luke's destiny. Kenobi further convinces him that "[he] cannot escape [his] destiny" (ROTJ). Luke then "comes to the realization that he must face [Vader] and make an attempt at saving him from the clutches of deception in the dark side" (Williamson-Jones). Realizing now that he can save his father from the dark side of the Force instead of killing him, he accepts his destiny and surrenders himself to the Empire, where he is taken before both Emperor Palpatine and his father. Mythologically, this situation leads to what Campbell terms the "atonement with the father" (Campbell, *The Hero* 126).

Luke is able to surrender himself to the Empire by clinging to the notion that his father is still able to feel compassion. He says to Vader, "I know there is good in you. The Emperor hasn't driven it from you fully. That is why you couldn't destroy me [at Bespin]" (ROTJ). Luke's feelings toward his father are closely akin to those of Campbell's archetypal hero, in that "one must have a faith that the father is merciful, and then a reliance on that mercy" (Campbell, *The Hero* 130). Vader, though, brings Luke before the Emperor, grimly replying that "It is too late for me, son. The Emperor will show you the true nature of the Force," that is, the nature of the dark side (ROTJ). In his attempt to turn Luke to the dark side of the Force, Darth Vader acts as what Campbell calls "the initiating priest," who introduces his son into his world, maturing him in the ways and customs of the father (Campbell, *The Hero* 136).

In the Emperor's throne room, Darth Vader and Luke Skywalker, in a definite style of good versus evil threaded with undercurrents of father versus son, engage in a gallant lightsaber duel. The victor of such a duel would hold the fate of the galaxy in his hands, yet the outcomes of the individuals seem to be more at stake. Luke wants to rescue his father from the clutches of the dark side of the Force; Vader wants Luke to join him so they can "rule the galaxy as father and son" (ESB). The ensuing battle leaves the audience wondering where the destinies of the two characters actually lie.

The dark side's stratagem is clear: force Luke to "give into [his] hate"; make him release his anger. Such emotions lead inevitably to the dark side. Nagging phrases from the Emperor such as, "Use your aggressive feelings, boy! Let the hate flow through you," nearly succeed in steering Luke along the same path as his father (ROTJ). When Vader announces his intentions of turning Leia to the dark side if Luke refuses to do so, Skywalker takes the offensive in defense of his sister: "Luke's Gesthemene is unavoidable. All his fears and doubts come crashing in on him all at once. He is void of peace and his fear, despair and rage consume him" (Williamson-Jones). Vader is brought helplessly to his knees, and Luke proceeds to sever the hand of his father. He looks down at his own prosthetic hand, a hand that replaced the one he lost to his father's aggression on Bespin. He realizes that he is becoming as "twisted and evil" as his father: "The seeker will have to face the dark side within. Some part of the hero is in the villain" (Young).

Here, the Emperor attacks Skywalker. Vader, seeing his son writhing in agony at the Emperor's onslaught, is suddenly overcome with compassion. He grabs Emperor Palpatine and hurls him into the central reactor core of the throne room, watching his helpless body plummet down the bottomless shaft. Vader, now physically and psychologically drained, asks Luke for one favor before he dies: "Luke, help me take this mask off . . . Just for once . . . let me look on you with my own eyes" (ROTJ). In accordance with Campbell's hero, Luke "beholds the face of the father, understands—and the two are atoned" (Campbell, *The Hero* 147).

Campbell himself, in an interview with Bill Moyers, notices this about Vader: "When the mask of Darth Vader is removed, you see an unformed man, one who has not developed as a human individual. What you see is a strange and pitiful sort of undifferentiated face" (*The Power of Myth* 144). Relating Vader's plight to the people of today, Campbell poses the question, "Is the system going to flatten you out and deny you your humanity . . .?" "This is the threat to our lives that we all face today" (*The Power of Myth* 144). Yet how does humanity "learn to live in [its] period of history as [human beings]"? Campbell answers, "By holding to your own ideals for yourself and, like Luke Skywalker, rejecting the system's impersonal claims upon you" (*The Power of Myth* 144).

Thus, using Vader's demise as a threat to humanity, Lucas praises individuality and humanness, setting it as a goal for his audience. Vader "live[s] not in terms of himself but in terms of an imposed system," and his

pleas to Luke in his dying moments convey to the audience his disappointment with the life he led (*The Power of Myth* 144).

After his stunning triumph over the dark side and the courageous redemption of his father, Luke "comes back to ordinary life" with what Campbell terms "The Ultimate Boon" (Young; Campbell, *The Hero* 172). This mythological "boon" "can be new wisdom, or skill. Often it is an insight of great value to the historical moment" (Young). Luke's "boon" is the attainment of his Jedi Knighthood. He has gained insight into the workings of the Force; he understands the power of the light side and the destructive nature of the dark. On a larger scale, he has returned the galaxy to the democratic ways of the Old Republic that existed "before the dark times. Before the Empire" (ANH).

Return of the Jedi further emphasizes the ideals of self-discipline and patience brought out in *The Empire Strikes Back*. Additionally, it gives credence to the concept of redemption and "atonement" using the death of Darth Vader as a vehicle. This vehicle also carries a universal warning to society, reminding it to exercise its human individuality and not become a mechanical puppet of a corrupt political system. Though the film offers a somewhat hackneyed "good over evil" ending, any departure from such a path would simply weaken the archetypal structure of the story.

What, though, was the exact purpose of such a simplistic structure? What exactly were Lucas's goals in creating the Star Wars Trilogy? Schechner claims that Lucas "wanted to give meaning to our contemporary world through a vehicle everyone could understand—a fairy-tale recast in celluloid." Lucas had a particular facet of "our contemporary world" in his crosshairs when he conceived *Star Wars*, though. His target was the children: "a whole generation growing up without any kind of fairy tales" (Pollock 138-39).

In agreement with his studies of Joseph Campbell, Lucas realized that the world he lived in had no modern mythology; the children had no heroes from which to learn crucial lessons of right and wrong nor the consequences of impatience, recklessness, anger, and aggression. Lucas saw myths of antiquity as trite and uninteresting to this new generation, and he sought "to provide a lesson to be learned—a lesson children could understand" (Schechner). Bill Moyers sees the success of the Trilogy as being directly related to the fact that "it came along at a time when people needed to see in recognizable images the clash of good and evil. They needed to be reminded of idealism, to see a romance based upon selflessness rather than selfishness" (*The Power of Myth* 144).

Star Wars is constructed so that children will see the inevitability of increased responsibility as they grow older, but they are also reminded that this responsibility will not overpower them; they will mature into adults with the ability to achieve their greatest dreams. After watching *Star Wars*, the children "know eventually they'll have to leave home, take risks, submit to trials, learn to control their emotions, and act like adults." The Trilogy gives them a means by which to go about becoming such adults along the imminent path of maturation. For children who "see life as a never-ending

series of challenges and obstacles, in which they always seem to be doing the wrong things at the wrong time," *Star Wars* serves as a "ray of hope" if they "fear they'll be little forever" (Pollock 139). They are able to see that Luke "shares those feelings at first, but, in the course of the movie, grows up and realizes his potential" (Pollock 139). They learn to accept the fact that they "can't run away from [their] fate" (Pollock 140).

Another thing Lucas wanted to impress on the minds of the youth who watched *Star Wars* was "a belief in a supreme being . . ." (Pollock 139). In an effort to preserve the universality of his films, though, Lucas did not want to adhere to the specific tenets of any one religion. The Force was born. He calls it, "A distillation of a lot of mytho-logical religious teachings" (qtd. in Handy 74). The Force was to some degree mod-eled after Lucas's own religious beliefs but, he claims that he is not "promoting a par-ticular idea or anything" (qtd. in Handy 74). When asked if the Force promotes a Judeo-Christian God, he simply responds,

> I wouldn't go that far. My spiritual
> perspective, I think, is broader than
> the Judeo-Christian. But I hate to
> get into putting a label on it, because
> I think what I feel hasn't been
> labeled yet, at least not to my
> knowledge. (qtd. in Handy 74)

To Lucas, the Force means merely "look-ing into yourself, recognizing your poten-tial, and the obstacles that stand in your way" (Pollock 140). To label the Force as a "religion," then, is somewhat of a misno-mer; its creation was primarily a means by which Lucas could pass on what he felt were worthy maxims to his audience.

Despite Lucas's child-oriented intentions, the adult population has found more subtle, advanced messages in the Trilogy. Lucas notes, "Because I don't come out and say MESSAGE in big red letters, it goes right past everybody" (qtd. in Pollock 271). When people begin to look for Lucas's messages, they are more numerous and var-ied than is initially obvious: "While younger kids interpret Star Wars in terms of simple "good-guy/bad-guy" scenarios, the older—more educated, more lived—people bring increasingly sophisticated paradigms [i.e...political ones] into play" (Diamond). Such is the case with Joseph Campbell. After viewing the Trilogy, he noticed "things that had been in [his] books but rendered in terms of the modern problem, which is man and machine" (Campbell, *The Hero's Jour-ney* 182). He saw that Lucas addressed the stereotypical science-fiction dilemma of whether machines will eventually be stron-ger than humans, or whether they will al-ways remain subservient. To Campbell, the "machine" also includes such entities as the "totalitarian state" and the "bureaucrat" (Campbell, *The Hero's Journey* 182).

With the Star Wars Trilogy, George Lucas has irrigated the minds of the world and ended their mythological famine. He has given the children a hero, but "the fact that *Star Wars* was designed for young people does not automatically make it bubble gum for the mind. He simply targeted an audi-ence that had not yet formed its prejudices" (Pollock 271). His films gave him an out-let for his own philosophical experimenta-tion and allowed him to reiterate traditional morality. In short, Lucas has given the world, indeed the entire galaxy, a much

needed dose of romantic fantasy.

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Political Imagination

by Julie Barkemeyer

The increased personalization of politics and the more pronounced role that language, and more specifically speech, have taken in politics are encompassed in something we term postmodernism. Images of political candidates and their ability to use "new language" appealing to the senses of the people belongs to the political culture found in the postmodern world. As man searches for new meaning in an era of rapid change, the time has come to examine the emergence of more personalized and charismatic politics.

Kyosti Pekonen in "Symbols and Politics as Culture in the Modern Situation: the Problem and Prospects of the New" described charismatic politics as "a struggle about people's political imaginations." In other words, individuals must decipher for themselves what is real or not real, what changes are occurring, and what the role of politics is, especially in the age of "the new" where one feels pressure to adapt to the cultural integration taking place. For example, an individual has no choice but to go along with his or her integration into culture by acquiring the "new language" in order to be understood by all in the culture. Language is the lifeline connecting an individual to his culture, and a vital function in all of humanity. Because of this function, charismatic leaders who have the ability to stretch language to its fullest extent are able to successfully reach the people. Language is not merely an instrument for describing events but itself takes part in events, forming their meaning. When it comes to politics, it is usually the language of political events that stand out in someone's mind rather than the actual political events themselves. The language used to describe an outstanding event attaches to it a certain emotion that makes it more memorable. However, when a situation occurs that is new to society, new terms to describe such an event must be created. If the event is a crisis of sorts, any leader who can express what has taken place using "new language" is now seen as having a charismatic image. Pekonen explains that "charismatic politics is the way of politicizing some elements in deliberate postures to the world." Speech is carefully selected, each word serving some purpose to the presentation to draw the public in.

In this modern era, politics attempts to capture people's political imaginations; and, since the mass media is many times our only source of information on politics, its importance has grown tremendously. Politics, and especially elections, rely heavily on the mass media for newsmaking information which continually tries to produce the explicitly "new" and relay it to the public. In elections, as well, candidates use mass media to attract supporters by using "new" slo-

gans and "new" political posters. In order to be remembered, one's slogan must capture the public's political imagination by somehow reaching into their personal lives and experiences or simply by planting a catchy "new" phrase into their minds already clouded with media-caused political paraphernalia. This is yet another form of political charisma.

The ability to give new meaning to the run-of-the-mill daily routines in our society succeeds in establishing charisma. In charismatic politics, candidates, images, and issues are synonymous, not opposites. It is apparent that a personalization of politics has adopted a form over the years where a candidate's views on social and economic issues are not quite focused upon as much as are their images, including personal, family, intellectual and emotional lives. Our political culture in this postmodern society determines that a candidate who is good looking and appears likable will attract more support than an elderly man who has a few good points to share. Case in point: Bill Clinton and Bob Dole in the '96 election. Image may have contributed a great deal to Clinton's victory in 1996, as well as in 1992. Bill Clinton is a relatively young man whose towering, broad-shouldered physique and prominent facial features emit an air of protection, power, and control. People feel secure in his presence, sense his both fatherly and sonly manner, and are enchanted by his eloquent and poised speech. Bill Clinton, his likable nature blended with perfectly selected and postured speech, can be described as possessing charisma. On the other side of the coin, Bob Dole, in his seventies with his visibly war-injured arm,

stale voice, and often-grumpy responses, remained in the thick of Clinton's shadow during the election. Image is vital and, combined with the use of language can produce political charisma, while the issues sometimes become irrelevant in political campaigns in today's culture. Pekonen states that, today, politics are personal advertisements that say, "I will take care of you," and make the personal connection between two people (candidate and citizen) who most often are not in personal contact with each other.

Somehow, charisma is perceived differently today in a postmodern world than in previous history. Not only must a leader contain a certain type of image that captures the people's attention in a pluralistic society and have a knack for language and speech that is remarkably noticed, but he or she must also be able to express to the people "the new." Because times are constantly changing, people want to have a sense of political stability in their lives and want political leaders who can help them understand what's happening in current events and give them a definition of what is occurring. And, because people are forced by society to grasp the "new language" in order to be understood by those in their culture, they look to leaders to help them gain the definitions they need to become more a part of their culture. Increased personalization of politics and greater emphasis on image in political campaigns is the result of a more postmaterialist society. In other words, people are less enthralled with the candidate speaking on the economic state and would relate more to a personable candidate with a more global focus on other

values prevalent in our society. If a candidate is more amiable, the people perceive he or she is more trustworthy and more capable of taking care of them personally. In politics, people must decide for themselves what is real or not real, the role they want politics to play, and, in essence, they must struggle with their political imaginations. Unfortunately, people choose what they believe to be real and adapt to whatever changes take place politically, culturally, or socially, according to charismatic politics--the victor in this struggle.

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Baywatch Babe in Buckskin: Disney's Distortion of Pocahontas

by Lou Ann Wogamon

The account of Pocahontas and Captain John Smith is familiar to everyone through history books, elementary school story books, and even college-level literature books. The story of the encounter has also been a source of debate since it occurred. Even though many question whether or not the incident happened, it remains a well-loved story that has been retold many times throughout history. However, one must consider how historians come upon the stories they claim to be fact. Historical facts come to the historian in different ways, and each historian interprets these facts according to the story he or she wants to tell. It is the historian's responsibility to transform these facts into a story that will be understood by its audience. Hayden White, in his essay "The Historical Text as Literary Artifact," questions the status of historical narratives and how the historian determines the interpretation of these facts. White compares the historical text to literature because both genres have "fictive capabilities" (43). Using White's essay, this paper will analyze Disney's interpretation of *Pocahontas,* a story whose verity is inherently questionable, and show how a histori-cal text becomes literary artifact.

White states in his essay that historical narratives are "verbal fictions [. . .] the contents of which are as much invented as found and the forms of which have more in common with their counterparts in litera-ture than they have with those in the sci-ences" (42). White does not mean that his-tory is "made up" but rather that the histo-rian selects only part of the information to include in the text. The audience, there-fore, only receives the information the his-torian recreates. Disney's account of Pocahontas becomes a verbal fiction be-cause of the contrived "facts" Disney in-cludes in its film. In order to examine how Disney changed what we know of the story, we must first look at Captain John Smith's written account.

Smith first related the story seventeen years after its occurrence in the *General History of Virginia, New England and the Summer Isles*, compiled and published in approximately 1624. For several days be-fore the alleged incident with Pocahontas occurred, Smith had been with the Powhatan tribe near what is now Jamestown, Virginia (110-111). It is un-

clear whether Smith was a captive or a guest of the Indians. Thomas Studley records Smith's version of the encounter with Pocahontas and the Powhatan tribe:

> Two great stones were brought be fore Powhatan; then as many as could, laid hands on him, dragged him to them, and thereon laid his head and being ready with their clubs to beat out his brains, Pocahontas, the King's dearest daughter, when no entreaty could prevail, got his head in her arms and laid her own upon his to save him from death. (111)

The last twenty-seven words of this passage are the entire basis for the Pocahontas story. Yet, in a separate account written shortly after Smith's stay with the Powhatans, he never mentioned this incident. It was only after Pocahontas' death that Smith chose to write of the incident.

Many historians believe the account Smith wrote; yet, using White's essay, the account can be interpreted in any number of ways. For White, the nature of history prevents it from having straightforward scientific observations. History can neither be tested, reasoned deductively, nor processed objectively as the sciences because the real life experience is already past and irrevocable. White says that historians use "emplotments" with which they chronicle facts into "specific kinds of plot structure" (46). These plot structures, or patterns, fit into categories White defines as tragic, comic, satiric, or romantic. It is these patterns that distort reality because the historian chooses, perhaps unconsciously, which of these patterns he or she considers most

appropriate to his or her story. Smith's tale implies a literary narrative because Smith offers no historical facts to support his story.

It is the last of these plot-structures, the romantic emplotment, that the most recent re-telling of the Pocahontas story incorporates.[1] Disney's *Pocahontas* combines both romance and myth to tell its version of history and consciously distorts the known facts almost beyond recognition. Disney distorts Smith's tale even further into the plot-structure that Disney considered most appropriate for its version of the Pocahontas story.

The film tells the story of the Virginia Company's 1607 expedition to Jamestown, but from beginning to end it is a love story between Pocahontas and John Smith. Another distortion casts John Ratcliffe as the villainous governor of the colony. In reality, Ratcliffe was never governor of the colony but instead the second president of the colony (Montgomery 14). While the movie is historically accurate in some respects, the majority of the movie is pure fiction. The facts Disney included in their version of the story are few. *Pocahontas* does contain some truth in that the settings of Jamestown and the Powhatan village are portrayed accurately, according to current archaeological knowledge. The animation captures America's wilderness beautifully, and the city of London and the *Susan Constant* though animated, are accurate as well. Last, but not least, John Smith indeed wrote that Pocahontas thrust her head between his and her father's clubs.

Yet, the film contains more inaccuracies than accurate facts, and as a result members of the current Powhatan tribe protested

that the film is far from historically correct. However, Roy Disney answered their complaints by claiming the film to be "responsible, accurate, and respectful" (Powhatan Renape). And in a CNN Entertainment News interview conducted by Michael Okwu in June 1995, Disney said, "We went and did our research. This is our version, our interpretation of what we see to be the really important points about what this legend told."

Perhaps it would be more important for Disney to point out that their story contains "facts" that the legend does not tell. In the same way White says historians seek out "different kinds of facts because they had different kinds of stories to tell," so does Disney seek out only those facts that would tell their particular story (48). White says, "One of the marks of a good professional historian is the consistency with which he reminds his readers of the purely provisional nature of his characterizations of events, agents, and agencies found in the always incomplete historical record" (42). Disney fails to remind their audience that they have taken liberties with the historical record in order to tell the story they wanted to tell.

Probably the most significant inaccurate account is the image of Pocahontas. Disney's animators drew Pocahontas and John Smith as sexy characters when they did not look this way at all. Pocahontas was a child between eleven and twelve years of age when she first met Smith, and he was about twenty-seven. Even though images of what Pocahontas and Smith may really have looked like exist, Disney conveniently chose to disregard this available knowledge in making their movie, choosing instead to make Pocahontas supermodel thin, a Baywatch babe in buckskin, who falls in love with the dashing Captain Smith.[2]

Rayna Green, director of American Indian Programs at Washington's National Museum of American History, says that while Indians would have worn buckskin clothing they probably did not wear the "one-shoulder look" that Pocahontas wears in Disney's movie (Faiola). Another expert on Indian culture, anthropologist Helen Roundtree, when asked about Pocahontas' looks, said, "She didn't have long, flowing, black hair. She sported a shaved head, with a single rat-tail-like strand, like all of the other Powhatan Indian girls of her time" (DiVincenzo).

As for John Smith, he was old enough to be Pocahontas' father as well as being a portly man with long reddish-brown hair, a beard, and a mustache. Disney fabricated the physical appearances of these two characters to please today's audience. These are the "facts" that Disney tells because the characters now fit into White's romantic plot-structure that Disney wants to tell. Changing their appearances enables Disney to have aesthetically pleasing characters, which makes the mutual desire between them more believable with today's audience.

Epistemologically, for White, historical facts become knowledge by aesthetic criteria as much as by any other criteria. Historians choose which facts are pleasing to them and therefore will be included in their story. White invokes Claude Levi-Strauss in saying that historians "construct a comprehensible story of the past only by a decision to "give up" one or more of the domains of facts offering themselves for in-

clusion in our accounts" (44). It is obvious that Disney has chosen to make their movie aesthetically pleasing, using a few facts to make it seem authentic enough to please their audience.

White writes, "The historical narrative points in two directions simultaneously: toward the events described in the narrative and toward the story type or mythos that the historian has chosen to serve as the icon of the structure of the events" (52). Disney's historical narrative leads the audience to the events in the movie by creating a romance that is almost mythological in stature as the icon for their structure of the narrative.

Continuing the myth, Disney portrays the English as ethnocentric, destructive, and greedy. However, not all the English came to hunt gold as portrayed in the Disney movie. Some settlers wanted land while others went to Virginia with the purpose of converting the natives to Christianity. On the other hand, Disney portrays the Powhatans as totally anti-materialistic and peace-loving people, while historical records show that the Powhatan tribe conquered and subdued more than twenty other tribes in the area, gaining land and power for the Powhatan people. The tribe also willingly traded with the English for materials.

Disney also fails to clarify another myth concerning the Indian tribe encountered by the English settlers. Powhatan was the name of the tribal confederacy and not the chief, as the movie would have the audience believe. The chief's name was actually Chief Wahunsonacock. Pocahontas was a nickname as well, meaning "the naughty one." Her real name was Matoaka (Powhatan Renape).

Historical records further note that Smith was the one who favored force over the Indians while John Ratcliffe, whom Disney casts as the villain, favored conciliation. Smith's usage of the Indians ranges from the petty to the perverse. Examples include psychologically tormenting some, imprisoning others, keeping them in chains, forcing some into working for the colony, and occasionally sacking or burning Indian villages. Records also indicate that once Smith personally administered 20 lashes with a rope to a tribal member. Smith claimed the measures were needed to keep the Indians amenable to furnishing supplies. Ratcliffe wanted peaceful measures taken where the Indians were concerned.

Another bit of knowledge that Disney excludes is that Smith was considered a proud and boastful man in the colony. Thus, it is difficult to know if the Pocahontas story is historically accurate. The story is but one of three accounts found in his journals where Smith claimed his life was saved by prominent women. George Percy, who succeeded Smith as chief executive of the colony and witnessed his actions, wrote that Smith was "an Ambityous unworthy and vayneglorious fellowe" (qtd. in Montgomery 14). Then, after Smith's self-praising books began to circulate, Percy wrote, "That many untruths concerning these proceedings have been formerly published wherein the Author hath not Spared to Appropriate many deserts to himself which he never Performed and stuffed his Relations with so many falsities and malicious detractions" (qtd. in Montgomery 14).

After reading Percy's account, one has to wonder if Smith's account is truthful.

By most accounts of others who lived in Jamestown, it is possible that Smith lied about the entire incident, or he could have misinterpreted it as many historians believe. Powhatan historians say that the incident Smith wrote about was in reality an adoption ceremony where the closest member of the tribe to Smith was supposed to offer their life for his. It is believed that Pocahontas had befriended Smith and, therefore, throwing herself between Smith and the clubs was her role to play in the ceremony (*Pocahontas,* A&E). The events become interpreted in different ways just as White points out in his essay. As White says, the same sets of events tell different stories to different historians (47); it just depends on the historians' viewpoint.

Disney did send representatives to Jamestown to research the project when they began working on the movie, so the company was not ignorant of the known facts concerning Pocahontas. At the same time Disney researched history, it also sent representatives to scout land to build a theme park. In this way, Disney became like its character Ratcliffe in wanting to dig up the land for gold. When word of this got out, historians and preservationists decried Disney and did everything they could to stop the process. Fortunately, Disney did not acquire the land and was unable to develop a theme park in one of the richest historic areas of the United States. The public outcry over the proposed park might have been the factor that finally convinced Disney to make *Pocahontas* politically correct; the film may be seen as Disney's effort to regain the credibility they may have lost.

It is then possible to look at Disney's *Pocahontas* as a politically correct movie, invoking White's statement,

> Historical narratives are not only models of past events and processes, but also metaphorical statements that suggest a relation of similitude between such events and processes and the story types that we conventionally use to endow the events of our lives with culturally sanctioned meanings. (51)

White is saying that historical narratives are presented in such a way that they represent an analogy between the historic event and the story types familiar to today's audience, and that they become metaphorical statements for today's understanding. This is possibly why Disney chose to write their version of Pocahontas the way they did. Disney uses *Pocahontas* as a moralizing narrative in the context of a historical narrative, creating metanarratives with a more contemporary meaning for today's audiences.

With the main plot being the love story between the two main characters, the metanarratives include the conversion of Smith's beliefs that Indians are savages and the land is his to own. Pocahontas magically converts Smith's thinking with the movie's song "Colors of the Wind." Pocahontas sings:

> You think I'm an ignorant savage,
> and you've been so many places I
> guess it must be so,
> But still I cannot see
> If the savage one is me
> Now, can there be so much that you

don't know?

This song included in Disney's metanarrative preaches social tolerance to its audience. It is set to music to make it more appealing and easier to remember, especially for children. The narrative becomes symbolic and, therefore, becomes familiar to the audience's culture. White says that the symbolic structures in the historical narrative liken the events to the popular culture, giving it meaning for the culture (52).

The next verses in the song include messages of taking responsibility for the land. The lyrics are,

> You think you own whatever land you land on
> The Earth is just a dead thing you can claim
> But I know every rock and tree and creature
> Has a life, has a spirit, has a name...
> How high will the sycamore grow?
> If you cut it down, then you'll never know...

With these words, Disney preaches another metanarrative of respect for the land and emphasizes our responsibility for taking care of it. These subplots become the cohesiveness Disney needs to create a politically correct movie within the historical narrative, using the poetics of music and lyrics in the narrative to convey the messages of ecological awareness and how people's actions affect the land.

It is interesting that the movie contains these messages considering the castigation Disney received from the media for their attempt to open the theme park in Jamestown. The movie even pokes fun at the Disney company when it shows Ratcliffe's manservant sculpting topiary animals found in all the Disney theme parks while Ratcliffe sings "with all ya got in ya boys, dig up Virginia, boys!" By incorporating these features into their narrative, Disney gives meaning to their plot-structure that seems to convey a socially acceptable ideology. This ideology fits into White's idea that historical narratives become then "extended metaphors" where the historian, or in this case Disney, "charges our thought about the events with different emotional valences" (52). Disney "tells us what images to look for in our culturally encoded experience in order to determine how we should feel about the thing represented" (53). Disney's narrative is a metaphor that gives the audience direction in its behavior that is familiar to them; in this case, environmental awareness and social tolerance.

In his essay, White quotes Northrop Frye:

> History belongs to the category of "discursive writing" so that when the fictional element—or mythic plot-structure—is obviously present in it, it ceases to be history altogether and becomes a bastard genre, the product of an unholy, though not unnatural, union between history and poetry. (46)

White believes the historian makes sense of events in the same way that the novelist makes sense of events: both take events and employ recognizable story forms for the audience. He believes that historians give events symbolic meanings so they will create a "comprehensible plot-structure" and that one effect of the historian's work is that

he or she translates fact into fiction (53). Both of these elements are found in *Pocahontas*. Disney created a movie that has the usual story form that works while incorporating symbolic gestures of political correctness into the picture. White also says, "we can only know the actual by contrasting it with or likening it to the imaginable" (60). Unfortunately, it cannot be determined if the account Smith wrote of is true at all, so there is nothing to compare Disney's version to with any accuracy.

However, in response to Disney's *Pocahontas*, the Powhatan Renape Nation produced and performed the play *The One Called Pocahontas* in 1996. Presented by tribe members of the Powhatan Renape Nation, this original production presented the accurate version of the events of Pocahontas' life, according to tribal history. The tribe has a page on the World Wide Web on the Internet, and Chief Roy Crazy Horse wrote the following concerning their play on this page:

> This play started to take shape when we heard that the Disney Studios were to make a movie about us, a movie entitled "Pocahontas." We immediately wrote Mr. Roy Disney to offer our assistance. We had already been subjected to 400 years of lies and distortions and we thought this was a good chance to cooperate. Disney wrote us back that our assistance was not needed—they had already decided just what they were going to do. We are very disappointed, amazed, and angry that Disney would be so insensitive to the feelings, circumstances and history of the living members of the Powhatan Nation—one of the most devastated nations on this continent. We had quite an exchange of correspondence: Disney said he had artistic license allowing him to entertain, uplift, and inspire without regard to the truth. And so it was that another generation was spoon-fed one of America's fondest myths—at our expense.

Chief Crazy Horse went on to say the tribe's offers to assist Disney with the historical accuracy of the story were rejected. The Powhatan Nation strongly disagreed with Roy Disney's statement that the movie was "historically accurate and respectful." Chief Crazy Horse of the Powhatan tribe said, "It is unfortunate that this sad story, which Euro-Americans should find embarrassing, Disney makes 'entertainment' and perpetuates a dishonest and self-serving myth at the expense of the Powhatan Nation" (Powhatan Renape). This complaint creates the opportunity for another interpretation of the legend, as White points out, and one that seems to emphasize that Disney's attempt at creating a politically correct movie falls short of its goal.

Disney's goal is to entertain; yet, the company should realize it has a profound effect on children today. If Disney chooses to make a historical figure its main character, then the company has an obligation to present the facts as accurately as possible, although this may serve to be an impossible task considering White's essay. At the very least, Disney should include a disclaimer that their story, although based on an his-

toric figure and events, is not entirely historically accurate. Perhaps it is as difficult for Disney to recognize and admit the fictional element of its "history" just as White says it is difficult for historians to recognize the fictional elements of their "histories". As White believes, historians do not explain the provisional nature of their text, and likewise Disney does not want to admit to the provisional nature of *Pocahontas*.

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[1] Arguably, Disney's *Pocahontas* comes close to fitting the classic comic pattern of two lovers overcoming obstacles to live happily ever after. White quotes Northrop Frye in saying that romantic myths are based on a "quest or pilgrimage to a city of God or classless society," which more closely fits the contemporary sense of the romantic emplotment this paper addresses.

[2] Supervising animator Glen Keane searched magazines for inspiration and realized most of the clippings he referred to were of supermodel Christy Turlington.

The Black Death: An Appraisal of Human Depravavity and Superstition

by Beth Carmichael

Thought throughout the Middle Ages dwelt on the brevity of life and the certainty of death, but no time was more closely confronted with dying than the time of plague. The terror and abominable horror of life was played out in its harshest form during the Black Death of 1348 and the later plagues of the seventeenth century. The bubonic plague ravaged Europe, leaving no one untouched in its path of devastation. Entire families were carried away under its mask of agonizing buboes and wrenching pain. The depravity of the human spirit became unleashed as confrontation with death grew to be an everyday experience. The Medieval mindset was one grounded in religious severity, superstition, and acceptance of the harshness of day to day life. Yet, the plague introduced a terror into human existence that could not fully be explained by priests or wives' tales. The people grasped at anything that would help calm, cure, or explain the whirlwind of death that invaded every aspect of their lives. The church said the plague was corrupt air, while astrologers said it was the alignment of the stars. Still, no one knew for certain the actual cause of the plague. As death circled around every town and house, the psychological effects began to become more and more apparent. People began to lose hope as the sights and sounds of the plague numbed all emotions and kindred spirits. Moral lethargy crept into every village. The macabre aspects of everyday life began to manifest themselves through artwork, writings, sermons, and personal philosophies. The plague had tremendous emotional and psychological effects on Europe. These psychological effects can be seen through the moral decline that occurs, the extreme religious beliefs, the superstitious remedies, and the loss of faith in everyday existence. Taken together, all these factors lead to an overall feeling of devastating psychological and moral deprivation that overwhelms the European mindset during the time of plague.

First, one must explore the bubonic plague from an accurate scientific standpoint in order to fully understand the symp-

toms and the excruciating pain most people witnessed during the plague epidemics. When a doctor, researcher, or scientist speaks of plague, he or she is referring to a particular infectious fever caused by a bacilli called *Pasteurella pestis* (Mark 6). This bacterium is common among certain rodents and only causes them mild infection. But, when infected rodents live in close proximity to humans and are infested with a certain type of flea, the situation changes radically. The flea is so constructed that its sucking mechanism is easily blocked when it is covered with plague bacilli. That valvular obstruction prevents the flea from feeding by sucking in blood. Instead, it ejects deadly plague bacilli as it repeatedly punctures its victim in an attempt to feed (Bowsky 2). In typical bubonic plague there is an incubation period of two to eight days. The bacilli are chiefly concentrated in the swollen lymph glands of the armpit, neck, and groin.

Many writers during the time of the Black Death, such as Boccaccio, and later plague epidemics, like Daniel Defoe, recorded their observations of the symptoms and the tremendous torment of the sufferers. Boccaccio describes that in the beginning, certain swellings arose in the groin or under the armpits, "whereof some waxed of the bigness of a common apple. . . ." (Bowsky 7). Defoe relates later that the plague boils, when they grew hard and would not burst, caused such terrible pain, that many, to escape their torture, threw themselves out of windows or took their own lives in some other way (32). Grahm Twigg, in his biological reappraisal of the plague, states that plague produces a progressively intoxicating effect on the nervous system. Some patients show insomnia, others a wild delirium, as seen in Defoe's accounts, and some stupor. In all cases, there is a loss of coordinating power over voluntary muscles, along with a dulling of the senses (19).

The Black Death gradually devastated the entire continent. The plague was not a tiny infection that came and went, affecting only a small number of towns and cities. It wiped out mass amounts of the population, leaving many towns deserted and taking some completely off the map. In any given area, between one third to half of the population died (Marshall 485). It is conservatively estimated that twenty-five million out of a European population of one hundred million died during the medieval plague years 1347 through 1351 (Marks 5). It is important to recognize that these numbers are only estimates because many of the death rosters could not be accurately kept with the frequent deaths of the clerks and sextons of the parishes. Also, the vast numbers buried in the fields and mass graves were never counted (Hart 107). The immeasurable number of deaths is astonishing and only one of many factors that lead many people into an emotional tailspin as they watched their entire family and countless neighbors carried off by the horrible illness.

The fact that the cause of illness was unknown made the years of the plague even more frightening and also led to the invention of many absurd and unfounded theories. Many thought evil vapors spread through the air from water drawn off the ocean (Marks 78). Others thought these

noxious vapors came from chasms in the earth due to earthquakes (Hecker 10). Variations in the weather such as a prevalence of south wind, excess of rain, or evil smelling mists were all blamed as sources of the plague (Nohl 68). Still others firmly believed that constellations determined the destiny of man. Hippocrates and Avicenna, the two chief medical authorities, taught that comets, auroras, and, particularly, eclipses of the sun and moon, were precursors of future pestilences (Eckert 56). A fundamentally superstitious group, medieval people often believed fantastical explanations because they made the disease understandable and gave people a sense that they were protected if they knew the causes.

The church held a different view that did not involve scientific causes. It instead believed that the wrath of God had come upon man and that the day of judgement was soon approaching. Until the beginning of the seventeenth century, the opinion was prevalent that God inflicted the plague upon man as a punishment for his sins (Nohl 114). Christians had viewed outbreaks of pestilence as the just punishment of an angry God (Martin 90). The Spanish clergy attributed the outbreak of the plague to the opera; the English bishops blamed it on the theatre. Particularly long pointed shoes which had come into fashion during the Black Death were suppose to have caused annoyance to God (Hatcher 23). Matteo Villani, an Italian monk, during the Black Death, remarks: "My mind is stupefied as it approaches the task of recording the sentence of divine justice mercifully delivered upon men, who deserve, because they have been corrupted by sin, a last judgement" (Meiss 66). For many worshipers, the plague signaled the beginning of the Last Times before the end of the world. With this notion in mind many believed and understood the plague to be part of a divine plan that with patient endurance would be rewarded (Marshall 516). As causes circulated and the death toll rose, more and more absurd ideas developed. Ignorant men were overwhelmed by forces that were beyond their control and understanding, leading them eventually to search for and accept any explanation (Bowsky 73). Unfortunately, with each new idea, a new element of fear was added to the ever-increasing horror of the plague.

The medieval people lacked the knowledge with which to respond or save themselves. This subsequent fear could lead to a broad range of manifestations of intense religiosity and emotion (Bowsky 1). The Black Death intensified the medieval preoccupation with death, people everywhere were ready to seek the consolation offered by religion (Marks 92). Repentance seized men, admonishing them to make their last hours ones of pure Christian virtue (Hecker 21). Worshipers seeking solutions to the horrors of the plague put their trust in the belief that there was divine relief and if one prayed enough, God could be persuaded to change his mind (Marshall 527). The measures used to induce God's mercy were confessions and communion, a three day fast at the end of July, the distribution of alms to the poor, prayers, displays of holy sacrament and the relics of the saints, and processions (Martin 101).

Plague brought sudden changes to late medieval Christianity. A cult of new saints arose. They were generally poor men rec-

ognized by the church hierarchy with great reluctance. The best example is St. Roch (Gasquet 87). Roch's characteristic gesture in Renaissance images is the display of his plague bubo. The sight of Roch scarred by the plague yet alive and healthy gave many people hope of a cure (Marshall 505). Throughout the pandemic, for many towns, their first line of supernatural defense remained the local patron saint. At the heavenly court, the local saint could be relied upon to plead the community's case (Gottfried 53). Saints were heavily relied upon as messengers to God and gave hope to those suffering from the plague.

The Flagellant movement is a radical example of deep religiosity and the extremes to which fear can push the human psyche. The Flagellant movement is regarded as an attempt at self-help on the part of the people who, deeply disappointed by the church, in great distress of the Black Death, found the courage to appeal to God directly for help and salvation (Nohl 235). The Flagellants believed that the anger of Christ could be appeased and the plague terminated by a pilgrimage, in accordance with the number of years of Christ's life, thirty-three and a half days (Gottfried 56). Many of the Flagellants could not finish their pilgrimage due to infection caused by their self-inflicted wounds. They used a scourge that was a kind of stick from which three tails with large knots hung down. Through the knots, iron spikes were thrust. With such scourges they beat themselves on their naked bodies so that they became blue and swollen, often opening up deep gashes (Nohl 230). They did this in each town they came to often drawing great crowds. The Flagel-

lants provide a uniquely revealing insight into the mind of medieval man when confronted with devastating and inexplicable catastrophe (Bowsky 66).

Of course, not everyone believed in giving his or her spirit over to the church or relying on heavenly saints to appeal for them in the kingdom of heaven. Others, on the contrary, considered eating and drinking to excess, enjoying amusements of all descriptions, indulging in every gratification, and acting indifferent to what was passing around them (Hecker 30). The self-abandonment provides yet another view into the medieval reaction to the plague and emphasizes the subsequent mental and social breakdown felt by many during the time. Many in Florence were convinced that for reasons of health, it was absolutely necessary to lead as dissolute a life as possible. "The most reliable medicine, they maintained, was to drink extensively and to have a good time, and to wander about with song and merriment" (Nohl 207). Instead of sorrow and mourning, indifference, frivolity, and mirth appeared (Hecker 31). One would think that with death lurking around every corner it would act as a deterrent from sin; yet, many found the catastrophe of the plague to be a time a of greater misdeeds. Daniel Defoe said: "The entire population, or greater part of it, has become even more depraved, more prone to every kind of vice, more ready to indulge in evil and sinfulness, without thought of death, or of the plague, or even of their own salvation" (103). It seemed that since men were few, they forgot the past and resigned themselves to a more shameful and disordered life than they led before (Meiss 67). This self-degrada-

tion supplies another window into the emotional reaction caused by the plague.

There were many remedies promoted during times of plague that give testament to people's fright and emotion and just how little they knew of what was taking over their communities. Religious remedies recommended that people stay at home with doors and windows shut; and, if someone absolutely had to go out, he should carry camphor, amber, or some disinfectant (Bowsky 26). Jeronimo Nadal, a Jesuit priest, suggested masses and prayers, fumigation of rooms, segregation of the sick, and flight to avoid infection (Martin 92). A French canon of the Low Countries writes: "I write to you, my friends, that you may know the dangers in which we live. And if you desire to preserve yourselves, the best advice is to eat and drink temperately, to avoid the cold, not to commit excess of any kind, and, above all, to converse little with others, at this time especially, except with those whose breath is sweet" (Gasquet 42). Other remedies included juniper, rosemary, sage, rosewater, red vinegar, lemon and citron juice, hyacinth, bezoar, contrayerva, and theriac. These things were to be used to prevent infection by pouring them often on the nostrils, temples, and wrist (Martin 113).

Physicians recommended treatments that involved more "scientific" measures. They advised that the hands and feet be washed regularly but warned against bathing the body because it opened the pores. Physicians cautioned their patients not to sleep on their backs at any time because it made it easier for foul air to flow down the nostrils into their lungs (Giblin 26). Many remedies furthered the patient's sickness and quickened his or her progression toward death. This can be seen most directly in the surgical practices of the time. Surgeons believed that the Black Death interrupted the flow of the body's humors. Since the heart produced the most important of these liquids (blood) doctors thought that to improve circulation it was most effective to bleed the veins close to the heart. By doing so the surgeon meant to cool the body and help it fight the disease, but in fact, bleeding only weakened the body's defenses (Twigg 53). Soon people began to lose faith in their physician's medical expertise and turned to a more personal and superstitious role in their own healing. People thought the plague was a poison in the air so mad fumigating occurred with little favorable results (Nohl 92). It was even believed that spiders, particularly the large and speckled species, absorbed all poison in the houses and were thus permitted to spin their webs everywhere (Carmichael 223). Daniel Defoe relates that amulets were worn by nearly everyone, as were spells, signs from the zodiacs, papers fastened with many knots on which certain words or figures were inscribed (99). One pamphlet published during the 1665 plague in London, recommended that live pigeons be used to suck the venom from the buboes (Hart 110). Throughout the streets, quacks peddled cures. The frightened poor bought freely from them, paying money for what was at best useless and worst poisonous (Bell 96). In such a crisis, people would clutch at any straw that seemed to offer hope or a cure. The church and doctors provided no help as people watched the death count rise.

Feelings of despair caused more and more people to retreat into the world of superstitions and wives tales.

Even doctors relied on superstition in part. Superstition played a major role in medieval life; unenlightened doctors of the day were as much slaves to it as others were. As an outcome of his faulty education, the typical doctor relied heavily on hocus-pocus. He visited his patients attired in a fine blue robe, accompanied by two pages. The whole performance was calculated to inspire trust and confidence (Marks 82). It is exactly this trust that many people were looking for. Many realized that they were dying and were anxious to talk, however ill or short of breath they might have been. Telling the doctor of their illness seemed to make it less frightening. Doctors and priests provided a familiar custom that made death a little easier. People were starved for any recognition of formal customs. Even if the doctors did not give adequate treatment, the ritual still provided sufferers with a since of security. It was when the plague was at its height that this security was shattered. Doctors refused to treat patients even when offered money. Many fled, leaving their patients to languish without help. This abandonment added to people's desperation and even hurried many to their deaths as they thought all hope was lost.

Flight was the first rule obeyed by those who could afford to leave. Jesuit accounts provide ample documentation about people who fled epidemics of disease. Pedro Parra, writing from Valencia, noted that a "rumor of pest" resulted in the departure of half the town. Johann Reidt stated that the pest, which afflicted Cologne in the summer of 1564, was so fierce that it drove many from the city and closed the market (Martin 116). Flight left a lasting impression on the people of Europe. The poor of Genoa, Florence, Paris, and London saw their wealthy counterparts collect their riches and leave. The poor realized that flight was the only defense, but few of them could pack up and go. Those who stayed felt deserted and betrayed (Marks 88).

Abandonment was a huge factor in the gradual decline in spirit and morality. Men and women caring only for themselves fled the city, their homes, their parents, kindred, friends, and goods, to find a new place to escape the pestilence (Nohl 24). When the fear became universal, the hearts of all inhabitants were closed to feelings of humanity. They fled from the sick, hoping to save themselves (Hecker 30). The sick lay ailing alone in their homes with no one to comfort them. Those most dear to them, regardless of the ties of kindred or affection, withdrew themselves to a distance; the doctor did not come to them, and even the priests were fearful and trembling when they administered the sacraments of the church (Gasquet 19). Relationships had no meaning as the plague seized family members and neighbors at random. Abandonment marked only the beginning of the slow downward spiral of public morals and the depraved mentality that overcame the population.

With many public officials dying from the plague, rules, regulations, and laws were virtually non existent. Laws vanished and everyone acted as he or she thought best (Hecker 31). A strange corrupt nature overcame those surrounded by death and pestilence. People entered whatever houses

they might happen to pass. This was very easy to do because plague-frightened owners had left them unguarded. Servants had died or fled. Those in authority could no longer enforce the law. The people came and went as they pleased, taking whatever they wanted (Marks 101). It was reported from Leyden that men defiled the walls with plague pus to drive the inhabitants from the house so that they could take whatever was left behind (Nohl 178). A doctor tells of nurses who were "struck down from Heaven in the perpetration of their crimes" and, particularly, of one amongst many who as she was leaving the house of a family, all dead, with her loot, fell dead under the weight in the streets (Bell 110). Lawlessness pervaded as numbers diminished and morality relaxed.

Further loss of morality can be seen in the burial rituals that took place. It is said that very few accompanied the bodies to the graves. Indeed, only the "meanest kind of people," such as grave makers and coffin bearers, who only perform their services for money, attended them (Nohl 26). In many cases, dreadful old women searchers would break in upon bereavement, tramping up the stairs to inquire if any were dead. Then came the bearers, who, with rude manners and careless concern, attached hooks and dragged away, in the sight of the survivors, the corpse of some beloved parent, sister, or child (Bell 184). During long epidemics, people tired of the constant burying also took the living, those who had lost all strength, more from starvation than from the plague, and threw both the living and the dead together into the graves so as to save the trouble of another journey (Nohl 168).

The cemeteries also became a problem as the dead became too many to give proper burials. Boccaccio says of the burials, "There were made throughout the churchyards, after every other part was full, vast trenches, where in those who came after were laid by the hundred and being heaped up there in by layers" (Bowsky 11). It was reported in Avignon, the pope found it necessary to consecrate the Rhone, that bodies might be thrown into the river without delay, as the churchyards would no longer hold them (Hecker 17).

As they watched carts full of dead roll by, the sick began to lose all hope. The profound discouragement of the sick was overwhelming. Men lost all hope of recovery, and gave themselves up as lost. This moral prostration quickly made them worse and accelerated the hour of their death (Gasquet 11). The Sienese chronicler Agnolo di Tura tells of burying his five children with his own hands. "No one wept for the dead," he says, "because every one expected death himself" (Meiss 65). People who survived even temporarily were numbed by shock. They behaved more like mindless animals than human beings (Marks 99). The plague with its daily repetition of dread and its visible horror numbed all normal emotions (Bell 173). Generations were seen as gripped by "a neurotic and all pervading gloom," reduced to terrified helplessness in the face of incomprehensible disaster (Marshall 487). The enormous lethargy that enveloped the entire population is an essential element in understanding the depressive existence that many people experienced.

The sights and sounds of the plague de-

scribed by the men that lived through it demonstrate the horror and psychological trauma of daily life. Defoe relates: "All that is heard is woeful weeping, fit to cause the deepest pity. The people are perishing, and there is such an abominable stench that it alone would suffice to kill, so that everyone longs for death, to be delivered from this fearful misery" (42). In the city and out-parishes were the frequent alarms of death. Little sound, writes one, was heard save groaning, crying, and dying. Coffins being carried, or the dead roughly tied head and foot in their shrouds and hurried away to burial, were the most common sights in all the public places (Bell 231). A dismal solitude reigned in London streets; every day looked like the Sabbath. Shops were shuttered, bolted, and barred; people were rarely seen walking about (Hart 105). Those seen walking about were overcome by such dread of infection that they passed through the streets in a corkscrew fashion, crossing from side to side to avoid contact with other pedestrians. Many would hold their noses when hastening past a door marked with the Plague cross, or on meeting a searcher, or a corpse being carried to burial (Bell 212). In Vienna, corpse-bearers and nurses were marked with a white cross and provided a particular pipe so that they might warn all advancing towards them (Nohl 111). Hart describes, that, when passing by doors that read "Lord Have Mercy Upon Us," the people walked by so gingerly and with such fearful looks, "as if they had been lined with enemies in ambush that waited to destroy them" (106).

The human psyche lay in waste during and after the plague. Their emotional trauma can be felt in the complete deprivation of a normal existence and the unending shock that gripped each human being as he or she watched the remainder of his or her family or neighbors being carted away to the mass graves. Years passed in the case of the Black Death as the seemingly endless epidemic caused many to lose all hope and forsake any old ties that once bound them to the community, their family, or an occupation. People desperate for a sign of hope grabbed at any cure, remedy, or belief that promised relief from the pain that paralyzed the entire continent; yet, superstitions did not abet the constant uncertainty of death and salvation. Abandonment from priests and doctors added horror upon horror as patients spent their last remaining hours morally and physically stranded. The psychological effects of the plague are countless; to understand them, one must explore the depths of depravity that have ravaged the human consciousness.

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Towards the Lush Life: History and Analysis of Jazz Music and Pop Culture in the Czech Republic

by Gaines B. Brake

In much the same way that the Czech Republic has experienced an eventful political history, it has also seen the waxing and waning of cultural and social phenomena. Among the dearest of these to the Czech people has been the development of pop culture. More particularly, the Czech Republic has enjoyed the matriculation of an art form that is unquestionably American in nature—the art of jazz music. This small Central European country has, in the last century, endured war and oppression enough to stifle creativity. Nevertheless, despite the tremendous weight of such adverse circumstances, Czech pop culture has proven itself to be a phoenix of creativity and self-expression, rising from the ashes of an oppressive Communist regime. Such has also been the case for jazz music in the country.

Cultural steadfastness should not come as a surprise to those who are familiar with the Czech Republic's rich musical history.

From the strict tonality and predictable harmonic organization of Mozart opera to the "cool" fusion sounds of contemporary Czech guitarist Rudy Linka, the Czech people have been forthright in their appreciation and enjoyment of good music. Insistence on the accessibility of entertainment and culture in addition to high standards of technical perfection among those performers have endured the oppression of such stark opposition as Hitler's Third Reich and a recently fallen Communist regime.

In light of such an eventful history, I intend to analyze the *pop* cultural development of Czechoslovakia. First, I will present a synopsis of the political development of the country. Throughout this synopsis, I will outline the emergence and evolution of Czech pop culture with particular emphasis on jazz music. I will then place these observations in context with political history. From this temporal discussion, I

will lead into a contemporary analysis of what is currently taking place in the world of Czech jazz. I will bring into this discussion the lives and work of specific musicians. Ultimately, I will combine this information with personal observations made in Prague to produce hypotheses regarding the relationship of the Czech people to their jazz. Additionally, I will draw conclusions as to the role of jazz music and pop culture in the political *and* social history of the country.

After the First World War, on November 14, 1918, Tomas Garrigue Masaryk was elected president of the new Czechoslovak state by the interim Parliament. The new republic was composed of Bohemia, Moravia, Silesia, Slovakia, and Ruthenia. Despite their using nationalistic arguments to justify a desire for independence from Austria-Hungary, the Czechs and the Slovaks actually comprised less than sixty-five percent of the total population of the new "union." Also living in the Czechoslovak region at the time were about three million Germans, 75,000 Poles, 745,000 Hungarians, and fewer than half a million Ruthenians. Naturally, the co-existence of such a variety of cultures under the umbrella of one unified Czechoslovak union led to occasional unrest. Such post-war chaos included an attempt to secede by ethnic Germans in the Sudetenland, a few radical Bolshevist uprisings, and some political gridlock with the two largest German political parties (Radio Prague 1).

By the beginning of the 1920s, the domestic political and economic situation in Czechoslovakia was basically stabilized. In fact, in the twenty years between the two World Wars, Czechoslovakia enjoyed being one of the world's ten richest nations and one of the most advanced industrial-agrarian countries. In Jeffrey Goldfarb's *After the Fall: The Pursuit of Democracy in Central Europe*, the new republic is referred to as "free of German domination, or even an idealized Hapsburg period" and "much wealthier than 'backward Austria'"(122).

It was during this interwar period that Czech literature and pop culture began to flourish. Fresh independence and economic prosperity paved the way for Czechoslovakia to offer the first regular radio broadcast in Central Europe in 1923. This new atmosphere may have influenced Frantisek Behounek to take part in the 1928 failed attempt to reach the North Pole in a zeppelin. Experiments in architecture were also taking place between the World Wars, resulting in Prague being home to the only Cubist buildings in the world. Other artists and writers also lived and worked during this time, including Franz Kafka, Josef and Karel Capek, Jaroslav Hasek, Emil Filla, Max Svabinsky, Otto Gutfreund, and Vaclav Spala (Radio Prague 2).

Unfortunately, though, the economic prosperity that spawned the cultural flowering of Czechoslovakia was soon brought to an end. The worldwide economic crisis of the late twenties and early thirties did not neglect the Czechoslovak people. During that time, 1.3 million people were unemployed. Hardest hit were the German-inhabited border regions, later known as the Sudetenland. As a result of the economic crisis and the growing influence of the Nazi movement in Germany, German people in

Czechoslovakia, at the encouragement of Hitler, began to call for autonomy, and later, for complete secession from the Czechoslovak state. In the elections of 1935, the growing influence of the Sudeten German Party became evident, as the party captured 15.2 percent of the vote over the traditional German Parties (the Agrarians and the Christian Socialists). Also in 1935, President Masaryk resigned from office due to illness and was followed by the ineffectual leadership of National Socialist Edvard Benes. The separatist platform of the Sudeten Party, led by Konrad Henlein, was one of joining the Czech borderlands to Germany. The aims of this party were directly in line with Hitler's aggressive policy towards Czechoslovakia. All of these factors combined to form one of the most turbulent times in the history of this small Central European country. Ultimately, Czechoslovakia's sovereignty was at stake (Radio Prague 2).

In September of 1938, the wishes of the Sudeten German Party came true when Germany, Great Britain, France, and Italy—the four great powers at that time—met in Munich. In accordance with France and Britain's policies of appeasement towards Hitler, the Munich Pact was signed, ceding extensive areas of Czech border regions to Germany. As if that was not enough, shortly after the Pact was signed, several other neighboring countries also took advantage of this window of opportunity. Poland took the Tesin region in the northern part of Czechoslovakia. Hungary annexed the southern part of Slovakia as well as Ruthenia. In short, Czechoslovakia lost about one-third of its territory (Radio Prague 2).

The years following this first breach of sovereignty were fraught with acts of oppression and derision against the Czechoslovak people. Aside from Hitler's invasion of Czechoslovakia in 1939, such oppression manifested itself in acts such as the murder of a Czech student in an anti-Nazi demonstration in November of the same year (Franc-history 1).

Soon to come was World War II. It was during this time that jazz music as an expression of pop culture began to catch the watchful eyes of Hitler's regime. Under the Third Reich, such media of expression were strictly regulated and oppressed. Jazz itself was, of course, called "perverted," "decadent," or "base," and it was often compared to the "moaning in the throat of a camel" or "the hiccuping of a drunk" (Škvorecký 17). As for the regulations, here is one list, published in Germany during the war, which was considered binding for all dance bands and orchestras:

> Pieces in foxtrot rhythm (so-called swing) are not to exceed 20 percent of the repertoires of light orchestras and dance bands. In this so-called jazz type repertoire, preference is to be given to compositions in a major key and to lyrics expressing joy in life rather than Jewishly gloomy lyrics. As to tempo, preference is also to be given to brisk compositions over slow ones (so-called blues); however, the pace must not exceed a certain degree of allegro, commensurate with the Aryan sense of discipline and moderation. On no account will

Negroid excesses in tempo (so-called hot jazz) or in solo performances (so-called breaks) be tolerated. So-called jazz compositions may contain at most 10 percent syncopation; the remainder must consist of a natural legato movement devoid of the hysterical rhythmic reverses characteristic of the music of the barbarian races and conducive to dark instincts alien to the German people (so-called riffs). Strictly prohibited is the use of instruments alien to the German spirit (so-called cowbells, flexatone, brushes, etc.), as well as all mutes which turn the noble sound of wind and brass instruments into a Jewish-Free Masonic yowl (so-called wa-wa, hat, etc). Also prohibited are so-called drum breaks longer than half a bar in four-quarter beat (except in stylized military marches). The double bass must be played solely with the bow in so-called jazz compositions. Plucking of the strings is prohibited, since it is damaging to the instrument and detrimental to Aryan musicality; if a so-called pizzicato effect is absolutely desirable for the character of the composition, strict care must be taken lest the string be allowed to patter on the sordine, which is henceforth forbidden. Musicians are likewise forbidden to make vocal improvisations (so-called scat). All light orchestras and dance bands are advised to restrict the use of saxophones of all keys and to substitute for them the violoncello, the viola or possibly a suitable folk instrument. (Škvorecký 8-9)

The foregoing list was taken from *The Bass Saxophone*, a novel by Czech author Josef Škvorecký. Although these regulations were, in fact, published in Germany, they *do* represent the type of oppression that all Third Reich nations were experiencing during the war, including Czechoslovakia. Škvorecký's novel provides an insider's account of what it was like to perform with groups that *did not* comply with the regulations and what it was like to work with groups that *did* comply. *The Bass Saxophone* displays the thoughts and reflections of its author in addition to a reliable account of the history of jazz in Czechoslovakia. Škvorecký also introduces some famous Czech jazz musicians of the time. Emil Ludvík, Karel Vlach, Milada Pilátová (known as Gypsy), Gustav Vicherek, and Honza Cíz were musicians who often performed in secrecy and were often punished for what they did (Škvorecký 188-90).

Following the liberation of Czechoslovakia by the Soviet Red Army in May of 1945, it was decided that the country would come under the Soviet sphere of influence. Postwar politics saw a government established and controlled exclusively by left-wing parties as pre-war right-wing parties were no longer allowed to exist. War criminals were punished and companies were nationalized. In the years to come, Communists would develop a greater political foothold. By June of 1946, a new Communist government was in place, and a direct relationship

with Moscow was firmly established (Radio Prague 11).

Throughout the Cold War, the Communist party maintained strict control over the Czechoslovak people. It was during this time that opposition to the Communist regime became the norm among the people, thus elevating the oppression bestowed by the party. People caught listening to rock music or foreign radio stations were thrown into jail. Those who dared to participate in more open forms of protest were sent to hard labor camps (Radio Prague 12).

In the 1960s, Communist oppression began to level off. Political moderates occupied top governmental positions, and changes took place in the Central Committee of the Communist Party in Czechoslovakia. Pop culture and artistic freedoms once again began to flourish as fear of the government diminished. This period came to be known as "The Prague Spring." Grassroots changes led to political reform in what has been referred to as "an experiment in democratic socialism" (Kilburn 1). Alexander Dubcek, First Secretary of Czechoslovakia's Communist Party at the time, called reforms an attempt to create "socialism with a human face" (Radio Prague 13).

During this time, basic human rights were recognized for the first time since 1948. Ludvik Vaculik's "2000 Words," an article published in various weekly literary magazines, encouraged the Czechoslovak people to take control of their lives and to struggle against oppression. The result was rock clubs, pop culture, and jazz music. "Television songs," precursors to the modern music video, were introduced. Laterna Magika and other forms of Black Light Theater opened, and the arts began to experiment with multimedia. Such changes were especially concentrated in Prague, but were taking place, to varying degrees, all over the country. Artists and writers such as Bohumil Hrabal, Josef Škvorecký, Ivan Klima, Milos Forman, and Jiri Menzl were all alive and active during this time (Radio Prague 13).

During the Prague Spring pop culture bloomed. Self-expression was gaining so much freedom that "Druhá Kultura," or "Alternative Culture" movements began to form as subculture groups. Athletes, writers, and artists were among those who established groups in attempts to create personal freedom for themselves. Such groups offered members an "alternate world." The existence of underground subculture groups amidst a regime that was already becoming more tolerant is evidence itself of the openness that was developing in Czechoslovakia (Franc-resources 1).

Eventually, the Soviet Union, as well as other Warsaw Pact nations, began to see the Prague Spring as a threat to the uniformity of the Soviet bloc. The Soviet Union and its satellite nations began to openly criticize what was going on in Czechoslovakia, but the Czechoslovaks didn't listen. Pressure from around the bloc peaked in the summer of 1968. In August of that year, Warsaw Pact forces (with the exception of Romania) invaded Czechoslovakia in an act of "fraternal assistance" and began a 20-year occupation (Radio Prague 13). Reformist leaders were taken to Moscow and forced to sign documents renouncing the "deviation" which had taken place in their

country. Top government officials were replaced with orthodox Communists and a policy of "normalization" was instituted (Kilburn 1). In the years that followed, oppression of pop culture and artistic freedom returned.

Underground protest continued, though. Active in such underground resistance was an alternative music group formed in response to the new policies. The Plastic People of the Universe was formed in September of 1968 by Milan Hlavsa, a former butcher's apprentice. Originally, the group was formed only in the interest of playing rock music or "the Big Beat," as it was known in Prague at the time. There was no motivation for political protest. Before long, however, the group became active in underground counterculture groups that came into existence in the late sixties. Such activity would not be tolerated by the regime. The intentions of the oppressive government were published in the journal *Tribuna*. The article clearly stated that, with regards to counterculture, the government would not allow ". . . flowers to blossom . . . We will cultivate, water and protect only one flower, the red rose of Marxism." The mere existence of the Plastic People, along with its influences from Western underground groups such as Frank Zappa, Captain Beefheart, and the Velvet Underground, posed a significant threat to the existing regime (Kilburn 2).

In the 1970s, all cultural unions were disbanded. Writers and artists who refused to comply with the policies of the Ministry of Culture were blacklisted. Clubs closed. Festivals and shows were cancelled, and "unhygienic" lifestyles were condemned.

Also prohibited was the use of English in lyrics or in band names. "Long hair, exotic dress, provocative behavior, funk, pessimism or high decibels" were also forbidden. Many groups were required to undergo a "requalification process," forcing them to change the style of their music and yield to the regime. In the years to come, the Plastic People experienced oppression in the form of arrests and convictions, in addition to mysterious fires and military bullying following performances by the band (Kilburn 2-6).

Police surveillance and interference continued to follow the activities of Alternative Culture groups like the Plastic People. While members of the counterculture were forced to take menial jobs under normalization policies, they continued to express themselves. Performances were considered "disturbances" by the government and were often described in the following manner:

> The music was screaming, banging, and unimaginable howling. The lyrics, which decency prevents us from reproducing even a fragment, are not merely 'vulgar,' but 'gross and obscene.' Our society will, quite naturally and rightfully, resist any moral filth and efforts to infect our youth with that which every decent man condemns and which harms the spiritual health of the young generation. (Kilburn 3)

Persecution of the Druhá Kultura movements and oppression of artistic freedom continued throughout the 1970s and 80s. Underground groups continued to protest as opposition to Normalization policies grew. The well-known Charter 77 move-

ment was formed to report human rights abuses internationally, and many other groups actively resisted. Many were jailed for their efforts (Radio Prague 13).

Specifically related to jazz music was the founding in 1971 of the Jazz Section as a branch of the officially approved Czechoslovak Union of Musicians. It began as a small group dedicated to listening to and promoting jazz. The group published a newsletter and an occasional pamphlet for its members. At first, the activities of the Jazz Section were perceived as apolitical by the authorities, and the group was left alone. During the late 1970s and early 80s, however, the Jazz Section saw a dramatic increase in membership. Before long, the membership roles had grown to 7,000 and the number of those who read the newsletter had grown to 70,000. These numbers placed the membership of the group far above that of Charter 77 and made the newsletter the most widely read uncensored publication in Czechoslovakia. It was during this time that Jazz Section publications began to explore subjects not directly associated with jazz. They published banned articles and speeches. They also obtained international attention through joining the International Jazz Federation, in hopes of staving off reactions from their own government (Roth 351-2).

Throughout this time, the Jazz Section carefully sought to distance itself from dissident political groups such as Charter 77 and VONS (the Committee to defend the Unjustly Prosecuted). However, the government eventually caught up with the group and began a series of official steps to hinder the activities of the group and limit its membership. It began by discouraging printing companies from printing Jazz Section publications and ended with the dissolution of the entire Union of Musicians—including the Jazz Section (Roth 352).

No straightforward reason had been given for the dissolution, and the Jazz Section immediately appealed the decision, claiming that no legal precedent existed for the action. Pending the appeal, the group's attorney encouraged it to continue regular activities. Despite numerous efforts by members, no explanation was ever offered for the dissolution. Instead, police searched homes, and, in September of 1986, the five leaders of the Jazz Section were arrested and jailed. After a trial, during which the Section was accused of, among other things, failing to comply with elaborate procedures for "liquidating" their organization, all five leaders were found guilty and sentenced to short prison terms. This proved to be one of the last open acts of oppression against pop culture. Vaclav Havel, renowned playwright and future president of the Czech Republic, stated in his commentary on the Jazz Section trial:

> The Jazz Section represents a model of behavior that is dangerous for a centralized power. If everyone acted as they did it would be the end of the totalitarian system. (Roth 353)

The people of Czechoslovakia soon lashed out against Communist persecution as they took to heart the commentary of their future president. The fall of the Berlin Wall had sparked the fervor for change in the Czechoslovak people, and a demonstration on November 17, 1989 began The

Velvet Revolution—a peaceful overthrow of Communism in Czechoslovakia. Between November 17 and December 29, a series of standoffs, general strikes and peaceful protests eventually brought about a Civic Forum with the government. During this forum, the people made their demands clear. A new coalition government formed as a result, and the Communist Party lost power. Vaclav Havel was elected president by the Parliament and later re-elected by the people (Radio Prague 14). The country was once again on its way to enjoying the freedom of artistic expression.

Having outlined the political trials and tribulations of pop culture in Czechoslovakia in the 20th century, we may now turn to a contemporary analysis of pop culture—specifically jazz music. After the "fraternal assistance" invasion of 1968, a number of musicians left Czechoslovakia in hopes of finding friendlier environments in which to live and work. Among them was internationally renowned jazz guitarist Rudy Linka. In 1980, Linka escaped to Sweden while on a four-day visa to visit Germany. From there, with the help of bassist Red Mitchell, he made his way to Boston's Berklee College of Music. According to Linka, he couldn't be happier than he is now, working in the United States. He says, "I think it has something to do with the fact that I was raised in a Communist country, and they keep you so low in expectations" (Enright 41). Since his move to America, Linka has released five albums, performed on concert tours, and played with well-known jazz musicians—both Czech and American. His recent album, *Czech It Out*, was recorded with fellow Czech musicians George Mraz and "Smitty" Smith, and, according to the October issue of *Downbeat* magazine, "reveals an inner peace that seems to stem from a command of all essential styles." The same article says of one of Linka's concerts in Chicago, "He demonstrated confidence, clarity and a near-perfect balance of tasty 'in-ness' and twisty 'outness.'" Linka also admits to a fascination with Czech folk music. On a recent visit to his homeland (which he makes quite often) he had the following to say of some local street musicians: "I go back and I say, these guys really know how to swing. It has the same kind of energy and upbeats" (41). Rudy Linka is a prime example of survival despite government repression.

Another Czech jazz musician, spurred on by the effects of the Velvet Revolution, is Martin Kratochvil. In the 1970s, Kratochvil's band *Jazz Q* escaped banishment and offered the Czech people an escape from the otherwise boring regimen that was life under Communist rule. After two years of "psychological war," Kratochvil was able to convince six Communist bosses to sign a document allowing him to study at Berklee. When he returned to Prague in 1977, he established a 20,000-member jazz federation. In a short period of time, he began producing jazz records out of his basement. Working officially as a state-sponsored producer, he was afforded the legal loopholes in which to operate and earned private wealth despite the fact that private enterprise was forbidden (Morais 78).

After the fall of the Communist regime in 1989, Kratochvil and several friends formed a private cooperative. Together, they

started Bonton Records, now the largest record producer in the country. The small company began by producing the underground records that the state had previously refused to make. Before long, Bonton had produced a movie, *The Tank Battalion*, about life under Soviet control and quickly began earning market share in new, privately owned Czech radio stations. When the Czech government began distributing stock vouchers to its citizens, Kratochvil directed his entrepreneurial energy towards founding the Trend Investment Fund in 1992. Over 90,000 Czechs brought their vouchers to the Trend Fund, which, in turn, invested in newly privatized companies for them. The Trend fund later bought a fifteen-percent holding in Supraphon, the newly privatized state music company. Bonton joined in and bought fifty-five-percent stake in Supraphon, essentially giving Kratochvil control over the company. Bonton itself expects to go public soon, and Martin Kratochvil continues to moonlight as a jazz pianist (Morais 78-9).

Martin Kratochvil and Rudy Linka represent only two Czech success stories. Many more Czech-born jazz musicians have survived years of Communist oppression to make names for themselves in an American-born art form. I recently had the opportunity to travel to Prague, Czech Republic and make some observations of my own. Based on my experiences, I can concur with my all of my research by saying that jazz music is alive and well in Prague. Jazz clubs such as the Agharta Jazz Centrum and the Reduta jazz club are currently offering jazz almost every night of the week. I visited these two clubs while I was in Prague and was amazed and quite entertained by what I saw. Czech musical groups were reproducing what I had previously thought could only be done *well* in America. Much to my delight, however, I found that I was just as able to walk into a jazz club in Prague and hear good music as I am here in the USA. The musicians I heard were not only technically proficient on their instruments, but they also had a feel for the music. What I mean is that they were playing *American* jazz in a distinctly *American* way. As exclusive as it may sound, traditional jazz, as an "American-made" genre of music, has a sound that is distinctly American. In Prague, I had honestly expected to hear jazz that elicited some sort of folk influence or something that distinguished it in some way from "authentic" jazz played by Americans. I was, however, surprised to discover that Czech musicians are playing jazz in the same way that American musicians play jazz. Stylistic nuances were all there. Among those playing "standard" style jazz, the repertoire was also the same. Even groups performing originals performed them with no noticeable regional "flavors." I saw one such group, *Hot Line*, at the Agharta, a jazz club in the heart of Narodni Trida—the "hottest" spot during demonstrations of the Velvet Revolution. *Hot Line* performed all-original sets of fusion music. Their technical proficiency was impeccable and their style was, of course, authentic fusion—no doubt about it.

While in Prague, I also observed the popularity of "Dixie" style jazz. "Dixie," "Dixieland" or "New Orleans Style" are all terms used to refer to the traditional delta style of jazz. This style is characterized by

small groups (often comprised of a trumpet and/or clarinet, banjo, tuba or string bass, and sometimes drums) performing a relaxed, sometimes march, style, heavily dependent upon improvisation. Such groups dotted street corners and other such public places throughout the city and also performed in clubs. Specifically, I saw a group in the Old Town Square, one on the Charles Bridge, and one in the Reduta jazz club. Once again, I saw authenticity. If I had closed my eyes during any of the performances, I'd have sworn I was in New Orleans. The Dixieland style, just like the fusion and standard styles that I also heard, was accurately presented. Rich clarinet obligatos decorated cornet melodies which were held together by the firm chord progressions of banjos and acoustic basses at the strict yet flexible beats of drum sets. Even street corner groups were made up of well-trained musicians who knew their instruments and their repertoire. My most obscure requests were played and sung by musicians who knew all the notes and all the words—heavy Czech accents notwithstanding.

I saw one Dixieland group, *The Cotton Gang*, at the Reduta jazz club. This group not only performed with the attention to style that I had heard from the street-corner groups, but they went a step farther. They performed what certainly had to be preconceived arrangements—a practice that is not generally the norm for Dixielanders who usually prefer spontaneity. They also played in formal wear—also unusual for Dixieland musicians whose lifestyle all but forbids such excesses. My suspicion of arrangements was confirmed on the CD which I purchased. Likewise, the professionalism of *The Cotton Gang* certainly added to their performance at the Reduta.

My preliminary research, along with my observations in Prague, leads me to some pretty firm conclusions about jazz music and pop culture in the Czech Republic. First, the Czech people take their pop culture very seriously. Their resistance to persecution throughout history supports this hypothesis. Their love of jazz as a type of pop culture is also quite clear. By my observation, there is certainly no lack of performers *or* listeners in this category. Secondly, jazz music is in for a flowering of its own in the Czech Republic. The fall of Communism has removed most of the government restrictions that previously hindered musicians. Jazzers are now able to pursue their art in whatever way they see fit. They are also able to travel to places such as America for the purpose of studying jazz. Without beaurocratic hindrances and governmental repression, recording companies now have a much easier time operating. As a result, the work of Czech jazz musicians is being produced and disseminated around the country and around the world.

Together, jazz music and pop culture should continue to thrive and feed off of one another. Based on what they have had to endure in the past century, the Czech people seem to have developed a unique appreciation for freedom of expression. They also appear to have a new appreciation for the creative capabilities of the human mind when it is allowed to operate in an environment of openness and encouragement. The Czech people will not soon for-

get what they had to endure to get where they are today. Likewise, they should remember that they themselves are responsible for the freedoms they now enjoy. Taking the advice of the renegade Vaclav Havel, before he was even president, the Czechs did institute the "model of behavior" presented by the Jazz Section, effecting an end to the totalitarian system. In terms of freedom of expression, two jazz standard titles are in order. The people of the Czech Republic have crossed to the "Sunny Side of the Street" and are now living the "Lush Life."

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Reasons Why Jefferson Went to War with Tripoli: An Evolution of Thought into Action

by Brian Neal

In the year of 1801, the United States of America entered a war with the North African state of Tripoli. The United States obtained a treaty with that nation in 1796 stipulating that the U.S. would pay a set amount of tribute each year to the Bashaw, the ruler of Tripoli, to guarantee American shipping safe passage through the Mediterranean Sea. The treaty lasted until 1800, when the Bashaw demanded tribute above that stipulated by the agreement and threatened American sailors and shipping. The newly-elected President of the United States, Thomas Jefferson, decided to wage war rather than submit to the new demands of the Bashaw.

Jefferson formed opinions about how to conduct affairs with the Barbary states long before he became President. Jefferson had determined in his previous dealings with the North Africans that the policy of paying tribute to these pirates was of no guarantee to America shipping interests. As President, he insisted that a more secure policy of dealing with the pirates was needed than the

policies enacted by the Washington and Adams administrations. These previously formed opinions greatly influenced Jefferson's decisions to go to war after acts of aggression by Tripoli.

America became independent of European government and diplomacy following the Revolutionary War. Before that conflict, American interests had carried on a good trade with Mediterranean countries, but that trade was insured by the guns of the British Navy. After the treaty of Paris in 1783, American ships were without the protection of the tribute paid by the British government to the Barbary states (Kitzen 10). America had a profound interest in trade with Mediterranean countries because over one-third of its foodstuffs went through the straits of Gibraltar. This route needed to remain safe for American sailors because it was a significant part of the growing economy (Rutland 173).

The Barbary states[1] lived by blackmail. The North Africans were never very powerful, but because the European nations

shared so little common interest, the Barbary pirates were allowed to exist and even command tribute from the more powerful European nations. This tribute was in the form of yearly sums of money, ships, and arms (Adams 165). Thus, the Barbary states enjoyed success for many centuries because Europe would not unite to act against these pirates.

The nations of Europe had their reasons for not subduing the pirates; they were well aware of the advantages that the Barbary states provided them. Some of these advantages were applicable to the United States. In 1783 Lord Sheffield, in his *Observations on the Commerce of the American States*, asserted that it was in Europe's interest to prevent the growth of American trade. Jefferson reasoned that allowing the Barbary states to exist in the Mediterranean would cripple American shipping, a British aim (Peterson 510).

The Continental Congress was well aware of the dangers the Barbary states presented but was burdened with an extreme debt after the Revolutionary War. The debt led to the dismantling of the Continental Navy in 1784 and a quest for a less expensive remedy to solve the pirate problem (Kitzen 10). Congress formed a ministry on May 12, 1784, to establish peace treaties and grant tribute to the four Barbary states and sixteen European nations (Peterson 292). The plenipotentiary ministers were Thomas Jefferson, Benjamin Franklin, and John Adams. These men had the power to appoint ministers to the Barbary states as well as negotiate treaties with the $8,000 granted them by the American government (Gibbons 51). Of these ministers, Jefferson, in

particular, would spend much of his time attempting to negotiate peace with the pirates in order to maintain American commerce in the Mediterranean.

Jefferson, Adams, and Franklin first dispatched ambassadors to Morocco and Algiers because these nations were generally held to be the most powerful of the Barbary states. They reasoned that if a treaty could be made with them, then the cost of a treaty with Tunis and Tripoli might be appropriately gauged for future negotiations (Kitzen 10). The ambassadors estimated peace with all four of the Barbary powers at $1 million in 1786 (P. Smith 653).

The Barbary states seeking tribute and treaty began to act against American sailors and cargo. Morocco seized an American vessel, the *Betsy*, in 1785 and held the ship for a time to remind America of the need for a treaty. Jefferson, then U.S. minister to France, sought a remedy immediately and thought the emperor of Morocco desired a quick end as well (Smith 380). Jefferson appointed Thomas Barclay to negotiate peace with Morocco upon George Washington's approval (Fitzpatrick 351). Barclay's endeavor proved successful, the treaty proved honorable and inexpensive to the American government (Kitzen 11). The *Betsy* was returned to America without a single captive harmed. Barclay's treaty was approved by Congress in 1787 and continued with only occasional interruptions (Gibbons 52).

Problems with the other states then began. On July 25, 1785, the schooner *Maria* was captured. Five days later the Algerian corsairs also took the *Dauphin*. Jefferson appointed John Lamb to conduct the nego-

tiations with the Algerians in light of the captured U.S. merchantmen (Wright 23).

However, Lamb was unable to bring the ruler of Algiers, the Dey, to terms that Adams and Jefferson could agree to. Prior to sending him, Jefferson had authorized Lamb to pay at the most $200 per man for the twenty-one captives. The Dey, however, demanded $59,496 for the captives (Tucker 69). Lamb, contrary to Jefferson's instructions, agreed to pay this within four months. This sum was not even considered by Congress; and, Lamb's bold move complicated future negotiations with Algiers.

Another problem developed simultaneously. John Adams wrote Jefferson in 1786 regarding a Tripolitan ambassador who had remarked that Tripoli was at war with the United States. The ambassador asserted that no American hostilities had led to the war, only a lack of a formal treaty. He claimed that there would be no peace without a treaty. This treaty was interpreted to mean a treaty in the form of large payments of bribes (P. Smith 653).

Jefferson began to see the growing problem in this region. He argued that there would be "no end to payment once the American government showed a willingness to be blackmailed" (Wright 23). While in France, Jefferson wrote a letter to John Adams proposing plans to end the problem with the Barbary states by force. Jefferson's proposed act of force would bring honor to America via Europe and would be a justified act of war (M. Peterson 855). Furthermore, Jefferson asserted that a navy produced by this act was the most effective means of arming the Executive. Also im-portant, the creation of a navy was cheaper than tribute because a navy would have to be built eventually (Gibbons 53).

In a later letter to James Madison, Jefferson pushed for a blockade of Barbary ports (Gibbons 53). To make his argument more formidable, Jefferson put forth the idea to form a confederacy among America's allies, powerful countries, and the United States itself. This confederacy's purpose would be to deal forcibly with the "maritime highwaymen" (Allison 85).

Jefferson's opinions were formed from first-hand dealings with the Barbary states and increased doubts about the security of the possible tribute policy. As stated by John Murray Allison, a student of the relationship between Adams and Jefferson for over two decades, in *Adams and Jefferson*:

> [If Jefferson] had possessed the power to do so, he would have sent John Paul Jones with a few selected frigates of war to the Mediterranean and confronted the pirates with the arguments of cannon balls. (71)

These opinions would be carried by Jefferson into his administration as president.

Realizing that force would not be approved by Congress, nor Lamb's treaty, Jefferson sought to free American captives held by the Algerians by the means available to him. Unable to rescue the captives through American mediation, Jefferson was forced to seek the aid of a European religious group, the Mathurin Order.[2] He approached the Order about their assistance, and a deal was approved by Congress on September 19, 1787. The Mathurins stipulated that the American interest be kept se-

cret because the Barbary Powers would ask much higher prices if they thought the Order was acting on behalf of the American government (Wright 24). The American stipend to each captive was to be cut off and replaced by one from the Mathurins. The captives' families were even forced to believe that American aid had been cut and all ransom attempts stopped. This was a trying time for the government and the families of the captives, as it appeared that the government had dropped negotiations, when in actuality it was doing quite the contrary (Kitzen 13).

Unfortunately, the Mathurin's assistance would be short lived. The French Revolution of 1789 took all funds from them when the French crown acquired land and revenues from the clergy (Tucker 70). It then became clear that freedom for the remaining fourteen captives would have to be bought by the impoverished American government.

Jefferson, now Washington's Secretary of State, proposed that America seek treaties beneficial to both countries. However if no such treaty could be made, he supported the "use of a naval force to protect commerce"; a naval force America did not yet possess (Owen 10). Jefferson's aggression scheme called for the capture of Algerians by American vessels in hopes of an exchange, but this proved impossible since the American Navy had been dismantled in 1784. His second plan of action, the purchasing of captives, was cheaper than building a Navy, but offered no guarantee of compliance (Kitzen 14).

Jefferson later lent total support to the idea of battling the corsairs of Algiers. He reasoned that Portugal had been at war with Algiers for three years. He advocated the use of force against the pirates in conjunction with other nations such as Portugal, Russia, Austria, Naples, and Malta that were also at odds with Algiers (Smith 833). Britain, however, intervened and conducted a truce between the Algerians and Portugal and, in doing so, undermined American interests again (Gibbons 56).

In 1794, President Washington finally acted to free the American captives in Algiers by appointing a commissioner, David Humphreys, to negotiate a ransom. The new Secretary of State, Edmund Randolph, directed the new commissioner to seek treaties and gave him $800,000 for peace and ransom. However, if this proved unsuccessful, Randolph informed Humphreys to look for allies in a joint action. Jefferson had proposed this alliance eight years earlier (Gibbons 57).

In March of 1794, Congress authorized the formation of a U.S. Navy to be comprised of six ships, to be assembled in the event that a treaty could not be agreed to. As it turned out, the Navy was not needed. Due to Humphreys' handling of the situation, the treaty of Peace and Amity with Algiers was signed on September 5, 1795, and ratified by Congress on March 7, 1796. The prisoners had been released with payment of ransom and further annual payments (Fitzpatrick 487).

The other Barbary states soon signed treaties of their own. The treaty of Morocco survived despite their changing of emperors in 1795 (Fitzpatrick 387). In Tripoli, Joel Barlow negotiated a peace treaty for $56,000 with no annual tribute (Ray 195).

Tunisian peace was negotiated for $107,000. It appeared that diplomacy had won out and Jefferson's proposed action by force was unnecessary (Gibbons 58).

On the other hand, this diplomacy and the treaties it produced had no permanent assurances of security. The power of the U.S. Navy still had not been witnessed in North Africa due to its involvement in the Quasi-War with France during the years 1798-1800. Jefferson's proposed use of force had not yet been needed, but this fact was soon to change.

By the time Jefferson assumed the Presidency in 1801, over one hundred Americans had been seized, and the situation proved unworkable. The U.S. had offered the Bashaw $200 per captive for the 131 captives plus a $20,000 annual tribute but this proved insufficient.[3] As remarked by Robert A. Rutland, this is where Jefferson's previously formed opinions began to be translated into action:

> Jefferson recognized when he
> served in Paris and thought the only
> way to treat the brigands was with
> superior firepower, not presents of
> gold watches, cannon, and finely
> woven textiles. (174)

Jefferson did not wish to continue the policy of tribute, but the same question that faced the Federalists was confronting the new Jefferson administration. Was it easier to pay the pirates tribute, or to build a navy large enough to challenge them?

If building a navy was the answer, Jefferson would have to work from the humblest of beginnings. On March 3, 1801, John Adams had signed into law the Naval Act of 1801. This law reduced the navy from thirty-four ships to thirteen. Moreover, of those thirteen ships, only six would remain on active duty. With even less firepower, the Republicans came to realize that they had less alternatives to offer than had Washington and Adams.

Paying tribute was not such an easy answer itself. Secretary of the Treasury Albert Gallatin and Jefferson created a plan to erase the nation's debt of $83 million within the next sixteen years (Mayer 211). The removal of the national debt was of utmost importance, and reducing the amount of tribute represented a major way of cutting down the debt. For example, Washington's administration had negotiated a $642,500 lump sum settlement plus a $30,000 annual payment to the Barbary states (Rutland 174).

However, the Jefferson administration's largest cuts were to come from military spending (Malone 102). According to Sidney Milkis, in *The American Presidency: origins and development, 1776-1990*, Jefferson opposed even a "minimal standing army." On a strict economic basis he cut many of the military programs that the Adams' administration had commenced (108). When Jefferson took office he docked all six frigates in harbor, halted work on the construction of shore facilities, and cut the number of naval employees. Cutting the navy "represented the largest potential savings in governmental expenditures" (Johnstone 93).

True to Gallatin and Jefferson's plan, by 1802, spending for the navy was cut by half of its 1801 level (Mayer 212). Jefferson was left with the question of how to treat the "brigands ...with superior firepower,"

if he had no firepower (Rutland 174). The U.S. possessed a weak navy, and Jefferson proposed even further cuts in both the navy and tribute payment. These two goals came into conflict. His administration's only solution was to depend on diplomacy to solve the United States' problems (Milkis 108).

Jefferson's fears were realized when the Bashaw pressed for more tribute at the end of John Adams' Presidency. In a letter from James Cathcart to the Secretary of State dated May 12, 1800, Cathcart stated that the Bashaw had observed that the U.S. was granting more liberal presents to Algiers. Furthermore, Cathcart stated that the Bashaw had been informed of the American government sending presents above those stipulated by the treaty. He wanted to know why the U.S. had not sent him a voluntary present. Cathcart told the Bashaw that no such presents had been delivered, but wanted the Secretary of State to advise him further (qtd. in Ray 201).

Jefferson received a letter from James Cathcart in March of 1801 that concerned the possibilities of the Bashaw declaring war on the United States. The letter alleged that Sweden had agreed to pay Tripoli $250,000 for peace and ransom of the 131 Swedish captives. Cathcart warned the President of future implications:

> ...the same terms will be demanded from the United States and that our fellow citizens will be captured in order to ensure our compliance with the same degrading, humiliating, and dishonorable terms. (qtd. in Kitzen 45)

The letter, which contained the actual threat made by the Bashaw, can be found in *American Tars in Tripolitan Slavery*. William Ray compiled this book in 1808 after his release from Tripolitan captivity. In the letter dated May 25, 1801, the Bashaw wrote of his desire for a more rewarding treaty by threatening American interests:

> We could wish that these your true expressions were followed by deeds and not by empty words. You will therefore endeavor to satisfy us by a good manner of proceeding. ...but if only flattering words are meant, without performance, every one will act as he finds convenient. We beg a speedy answer, without neglect of time, as a delay on your part cannot but be prejudicial to your interests. (206)

Earlier in the letter, the Bashaw claimed to have been under-compensated when actually the reverse was true. During the treaties' three years of existence, the Dey had received $83,000 in cash and gifts. This was twice what he had been guaranteed in the existing treaty; yet, he still pushed for more (Owen 65).

With his policies of cutting the debt and possibly fighting the pirates coming into conflict, the President was forced to act. Should he go to war or increase payment to the Barbary states? Jefferson firmly stated that he was "determined not to continue his predecessor's humiliating policy of purchasing peace," but this was impractical with no navy (Owen 61). Jefferson convened his cabinet to answer this question.

Jefferson met with his cabinet on May 15, 1801. The question was posed of what to do if the Bashaw declared war on the United

States. Jefferson and Madison began the meeting with the proposal of sending warships into the Mediterranean to protect American commerce, without going on the offensive. As Rutland put it, "Madison and Jefferson were sick of kowtowing to the Barbary villains, but were incapable of seeking an honorable way out" (175). All were in agreement that a cruise must be sent, but there were disagreements about the proposed cruise's instructions and the Executive branch's power to act.

Caught in the middle of the debate was Secretary of War Henry Dearborn, who pushed for a cruise of protection. He declared that the American forces should go forward to protect our commerce from the North African's hostilities. More aggressive was Secretary of State James Madison, who argued that the expedition should go forth and openly declare war on Tripoli to all nations. This was inconsistent with standard diplomatic practices of the day; it was a far more convincing declaration of war. Secretary of the Treasury Albert Gallatin and Secretary of the Navy Robert Smith agreed that "if Congress or any enemy declared war, the Executive was authorized to command and direct the public force" (Kitzen 46). Attorney General Levi Lincoln offered the most cautious of the plans put forth. He desired that "the Executive branch maintain a narrow definition of war. American ships could repulse attacks, but not seek out and destroy Tripolitan vessels" (Kitzen 46).

The situation presented to the cabinet demonstrated the failure of the tribute policy that had been implemented by the U.S. since its conception. The cabinet saw a need for change and voted to see if policing would be more successful (Owen 62). Citing the acts of the Bashaw as morally wrong, they voted to send a squadron to the Mediterranean, but made no formal declaration of war. This course of action was most compliant with what Attorney General Lincoln had urged (Seymour 64).

On Jefferson's order, Secretary of the Navy Smith sent out Richard Dale in command of a squadron of three frigates and a schooner with orders to meet force by force (Adams 166). However, Dale was also given $30,000 to offer the Dey as tribute in place of the promised naval stores. Jefferson thought the use of force necessary, but offered tribute in an effort to avoid loss of life and to save money. His previous assertions that aggression was needed were weakened after his assumption of office. The call to force did not seem as practical.

Unbeknownst to the cabinet, Jefferson had already ordered preparation of this naval squadron. Forty days earlier, on April 1, 1801, he had ordered the Secretary of the Navy to begin preparations of a naval force to battle in the Atlantic (Seymour 64). Therefore, the already assembled squadron departed for the Mediterranean Sea immediately.

The U.S. sent a cruise only to defend American interests and had not made a declaration of war. Dale had not been given orders to take the offensive for two reasons. First, America did not know if Tripoli had declared war; and, second, Jefferson believed he needed Congressional consent to authorize offensive action (Randall 562).

Jefferson wrote the Bashaw on May 21, 1801, explaining that the squadron being released was defensive, and its purpose was "to superintend the safety of our commerce there, and to exercise our seaman in nautical duties." He noted further that the letter received from the Bashaw May 25, 1800, had implied "purposes inconsistent with the faith of" the present treaty, and hoped his intentions had been misunderstood (qtd. in Ray 453).

The questions still persisted for Jefferson. He wrote convincingly that paying tribute was certainly not the answer. "The real alternative before us is whether to abandon the Mediterranean or to keep up a cruise in it" (Ford 63). The U.S. had spent $2 million over the past ten years for ransoms, gifts, and tributes. Now America had to come to terms that its efforts at appeasement had failed (Adams 165).

Another matter also complicated Jefferson's decision to go to war. David N. Mayer of the University of Virginia, states in *The Constitutional Thought of Thomas Jefferson*, that Jefferson's interpretation of the Executive branch's power to declare war are the most restrictive ever uttered by an American president (243). His Anti-Federalist party had portrayed the presidency "as an elective king with kingly powers" (Michaelson 140). Jefferson took the position that the president lacked the power to act offensively against a nation that had both declared and made war on the United States. He wished to act in a way that would not compromise the power to declare war expressly delegated by the Constitution to Congress or strengthen the Executive branch in any way (Mayer 244).

There were views to the contrary, and Jefferson received some criticism in the press for his somewhat passive actions. Alexander Hamilton, himself a framer of the Constitution, stated in the *New York Evening Post* that when a nation was at peace, it was Congress's duty to declare war. However, when already in a state of war Congressional declaration of war was not required. Jefferson's stance implied that "between two nations there may exist a state of complete war on one side and of peace on the other" (qtd. in Cronin 336).

In December of 1801, Jefferson finally received official word from Cathcart that war had been declared by the Bashaw. Ironically, war had been declared one day before Jefferson's cabinet discussed the possibility of this conflict. On May 14, 1801, the Bashaw of Tripoli declared war on the United States, in Tripolitan tradition, by cutting down the American flagpole (Rutland 174). The Bashaw stated that no act of American aggression provided for the declaration. He only told Cathcart that "it would take a great deal of grease [meaning money] to get it up again" (qtd. in Kitzen 45). War was declared because American tribute had not been raised.

Immediately, Jefferson wrote Congress on December 8, 1801, that he sought peace and possessed a "conscientious desire to direct the energies of our nation to the multiplication of the human race." However, as a realistic man, Jefferson thought it was time for more than defensive measures. He asked Congress "to consider whether, by authorizing measures of offense also, they will place our force on equal footing with that of its adversaries" (Kitzen 59).

The House of Representatives responded to Jefferson's letter quickly. One week after the letter was received, the House formed a committee to draw up a bill enabling the President to act "more effectually" (Owen 68). Congress passed a bill on February 6, 1802, authorizing the use of force against the Barbary states. The act was passed "for the protection of the commerce and seamen of the United States against Tripolitan corsairs," and formally recognized a state of war (Gibbons 66).

Using the limited forces he possessed, Jefferson issued orders for renewed action against the pirates on February 18. Jefferson could now act offensively, act defensively, and arm the existing thirteen vessels in service. However, he still lacked the power to create ships under Adams' Naval Act of March 3, 1801 (Malone 103). Weak as these actions may seem, the American move was bold. No country had attacked the Barbary states since the 1500's, when Charles V of the Holy Roman Empire did so (Seymour 58).

The first American squadron under Commodore Dale reached Tripoli on June 1, 1801, just two weeks after the Dey had declared war (Owen 65). Jefferson had sent him to seek peace, but if war had been declared, Dale was to disable all the Tripolitan ships he could and establish a blockade of their ports (Wright 88). The Commodore quickly ascertained the situation before him when he reached Tripoli and implemented a blockade.

Dale's blockade of Tripoli proved inadequate, though it had some effect. In fact, if he had been able to maintain the blockade, Dale might have forced the Bashaw to terms. But as it was, his show of force kept Tunis and Algiers from entering the war on the side of Tripoli.

However, Dale was still acting under the restrictive orders of Jefferson and his cabinet. An example of how restrictive Jefferson's orders were came early in Dale's expedition. Jefferson explained this in his first annual message, December 8, 1801:

> Unauthorized by the Constitution, ...to go beyond the line of defence, the vessel, being disabled from committing further hostilities was liberated with its crew. (qtd. in Mayer 243)

Dale had released a defeated Tripolitan ship due to constitutional considerations. This was the most restrictive interpretation possible, but it was the one that Jefferson consistently employed.

Having Congressional authorization, Jefferson sent his newest squadron to the Mediterranean on May 20, 1802. It was under the command of Commodore Robert Morris, who had orders to maintain Dale's blockade and also to provide convoys for American shipping in the region (Owen 69). James Cathcart was sent with the squadron to conduct peace negotiations but not without a further display of force. After the blockade was implemented, Cathcart was to then tell the Bashaw that no price for peace was to be offered to them. This move was made because the administration feared that if Tripoli was paid, the other Barbary states might then expect the same treatment (Gibbons 67).

Cathcart approached the Bashaw after the blockade was reinstated. The American consuls were instructed not to give more

than $5,000 per captive, including officers.[4] The Bashaw still demanded a $200,000 payment immediately and a $20,000 annual tribute (Gibbons 69). The increased demands were due to the fact that Morris's blockade was porous (Kitzen 60). Peace had not been agreed to and the Bashaw sent his ships into the Atlantic to seize American vessels.[5]

Jefferson's restrictive orders were not well received by top naval officers. James Barron, commander of the frigate *President*, wrote on January 28, 1803, that "the way the War is carried on disgrace must fall on our flag." He felt that the government had little concern for the officers' sentiments.[6] Such feelings were possessed by many members of the squadron. There was very little freedom to attack and finish the enemy.

Still hoping for a forceful resolution to the conflict, Jefferson asked Congress for several smaller ships to help with the blockade. On February 21, 1803, Congress obliged by authorizing the building of four small vessels for just this purpose. These vessels would leave in the summer under the command of Edward Preble (McKee 106). Tobias Lear was sent with this cruise in hopes of negotiating peace. He was sent with only $20,000 and authorized by Jefferson to promise no more than a $10,000 tribute (Owen 74). Jefferson again offered tribute, this time due to the deficiencies of Morris' blockade.

It is important to note that Jefferson requested the small vessels of his own accord. Many in the navy feared that they would not survive the sail across the Atlantic. Due to his innocence of naval knowledge,

Jefferson desired them for their speed and easy maintenance during peacetime. Jefferson believed they could later be used to defend America's coast. However, these ships were incapable of travel in rough seas. These criticisms proved true during the War of 1812 when the British Navy soundly defeated these smaller vessels (Johnstone 93).

Preble's mission was more successful than Morris'. For example, Preble used decisive action to implement a blockade of Morocco. This action proved the capabilities of American force and averted the possibility of Morocco joining the side of Tripoli (Owen 71). This move also inspired Algiers and Tunis to accept their present treaties (Adams 168).

However, Preble's mission was not without problems. The ship *Philadelphia* ran aground in November of 1803 in the harbor of Tripoli. Three hundred men surrendered and Tripoli was able to float the vessel into its harbor. The Bashaw increased his demands to $500,000 for a peace, plus a $20,000 yearly tribute. Had the capture of the *Philadelphia* not taken place, Preble might have been able to obtain peace by early 1804 (Owen 76).

Jefferson was again forced to ask Congress for more ships. Two days later, on March 22, 1804, Congress complied (Owen 77). Jefferson continued to ask for assistance for two reasons. The first was that he wanted to obtain a quick end to the war. The other reason was that he wanted a quick end without European assistance. Essentially, he wanted an honorable end and Europe's respect.

Commodore Stephen Decatur was able to return the United States to a more ad-

vantageous position. He stole into the harbor of Tripoli and destroyed the *Philadelphia* on February 16, 1804.[7] This put the Bashaw in a more compromising position. The Bashaw was now down to asking only $150,000 for peace and ransom, but Preble refused to accept (Owen 79). On June 6, 1805, Tobias Lear, the American consul to Tripoli, reported that he had informed the Bashaw that a $60,000 ransom would be all that he would get and it would on America's terms.[8]

The Bashaw also had domestic problems. Insurrection brewed in Tripoli as Preble's blockade began to affect everyday life. There were reports that the Tripolitans were threatening to replace the Bashaw with his brother. With Jefferson's approval, the U.S. offered to support the brother of the Bashaw with American troops.[9]

This coup was not needed though, as the Bashaw agreed to peace and ransom with Tobias Lear on June 3, 1805, for the exact sum of a $60,000 ransom with no annual tribute. The war ceased; all the captives were released. The U.S. now enjoyed the most favorable treaty granted by Tripoli (Owen 83). Interestingly enough, the ransom and all other costs incurred were paid for by import duties from Mediterranean nations to the United States. This ingenious special fund was also the work of Jefferson (Randall 563).

With these results, it would appear that Jefferson's approach had paid off. He had come to realize in his early dealings with the corsairs that the best way to deal with them was by force. He believed that the pirates would never be satisfied in their drive for tribute. American interests could not be secure in the Mediterranean Sea under the policy of paying tribute.

Jefferson sought to end the policy of tribute, to cut the navy and debt, and to weaken the power of the Executive. These goals inevitably had to work against each other's success.

Jefferson offered tribute only when American victory seemed unlikely or distant. His earlier statements about the use of force weakened upon his ascendancy to the Executive because he had little force with which to act. His belief in only a minimal standing army contradicted his earlier statements.

However, the paying of tribute to Tripoli was negated; and the tribute to the other Barbary states was reduced. Jefferson's goal of erasing the debt was not accomplished; but during his tenure of office, it was reduced by over one-third. Jefferson also acted within his Constitutional philosophy while in the Executive by allowing Congress to declare war. Ultimately, most of Jefferson's aims were somehow met.

Very few American lives were lost, and eventually, all the captives were returned home. Jefferson ended the payment of tribute to Tripoli and gained European respect for America. His previously formed opinions of dealing forcibly with the states of Barbary pressed him to act accordingly, and the United States of America entered a war from which it ultimately benefited.

[1] The four North African countries of Morocco, Algiers, Tunis, and Tripoli are also referred to as the states of Barbary.

[2] The Mathurin Order, a French Catholic Order, had served as negotiator with the Barbary states for centuries securing the release of many prisoners (Tucker 69).

[3] Appleton, Thomas. Letter to Thomas Jefferson.

[4] Madison, James. Letter to Tobias Lear. This letter contained Lear's instructions to offer ransom but no tribute.

[5] Maury, James. Letter to the Secretary of State.

[6] Barron, James. Letter to Samuel Barron. Samuel Barron served as commander of the entire U.S. squadron at this letter's time.

[7] Lewis, William. Letter to Elizabeth Lewis. William Lewis was present during the action. He served under Decatur aboard the *Intrepid*.

[8] Lear, Tobias. Letter to William Eaton.

[9] Lewis, William. Letter to Elizabeth Lewis.

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The Variety and Potential Purposes of Judaic Material within The *Gospel of Truth*, The *Gospel of Philip*, and The *Gospel of Thomas*

by Jonathan May

Searching for fertilizer amongst the fallen rocks of Jabal al-Tarif, within proximity to the Egyptian city of Nag Hammadi, a certain Muhammed Ali unearthed a sealed jar containing twelve leather-bound codices. The path from their discovery in 1945, until their final reassimilation within the Coptic Museum of Cairo, was one fraught with much bloodshed, intrigue, and irony. As general editor, James Robinson provides a contextual history of these documents within pages one through twenty-eight of *The Nag Hammadi Library*. Technically, Robinson notes that the importance of the books is evidenced by the facts that at one meter, each papyrus sheet was much longer than the standard length of twenty centimeters (11) and that each codex was leather-bound (14). Furthermore, the fact that the documents were uncovered within a sealed jar indicates a desire for their pres-

ervation (20). These texts were originally composed in Greek, although written in Coptic (12). Contained within these scripted letters lay a wealth of Gnostic heritage.

Some contend that Gnosticism is older than Christianity itself, while traditionally it has been regarded as a Christian heresy emerging with rival force in the second century (Wilson 19). Historically led by such figures as Basilides and Valentinus, Christian Gnosticism promoted a variety of beliefs focusing upon the salvation of the divine soul from an evil, material world created by an ignorant God of the Old Testament, unlike the position characteristically maintained within orthodox Judeo-Christian systems. This redemption can only be achieved through knowledge, or *gnosis*, which would be imparted through the Christ sent from the "Fore-Father," instead of the

Creator God of the Hebrew Scriptures. Broadly speaking, many elements of Gnosticism are derived from various forms of magic--especially recorded within Patristic polemics against this group--and syncretistic religion, as well as the heritage of ancient Israel (Murray 207). However, the Fall of Jerusalem in 586 B.C., combined with the Babylonian Captivity, marked the conclusion to an era of independent Israelian history. As a result of the global dispersion of Jews, or Diaspora, varying strains of Judaism developed in areas outside Palestine itself. This, in turn, contributed to the complexity of the Jewish religion already established (Wilson 1). Thus, it was made that much more difficult to grasp by outside observers. Yet, at the same time, Gnostics seemed to display a certain dependence upon aspects of Jewish cosmology, along with other things, within the construction of their own myths.

In *The Gnostic Religion*, Hans Jonas provides an interpretation of the mythic stories undergirding the text of the *Gospel of Truth*, where this dependence upon Judaism can be readily observed. Referred to as the perfect Aeon, Fore-Father, Fore-Beginning, Abyss, and the Father, there was one who was ultimately pre-existent and utterly incomprehensible as the perfect Aeon. From him issued various emanations, the last of whom being Sophia. Together with the other lesser Aeons, Sophia constitutes the Pleroma of the divine realm. At one point, there was a yearning within the Pleroma to know the Father through whom they had been begotten. The essence of this desire appears to be reflected in the *Gospel of Truth* 17.4-6; it states: "the totality went about searching for the one from whom they had come forth" (Robinson 40). Sophia became the most ardent of all the other Aeons in her pursuit of the Father. In vain, she insanely strove to comprehend the incomprehensible. Thus, it is found in the *Gospel of Truth* 18. 1-3: "Oblivion did not come into existence from the Father, although it did indeed come into existence because of him"(Robinson 40). Although Sophia was eventually brought to her senses by one of the other Aeons, the past Intention and Passion with which she had searched for the Father produced a formless entity. At the sight of this particular objectivation of her past strivings, Sophia responded with a host of strong emotions ranging from fear, to bewilderment, to grief, and to repentance. These, too, became manifest within the formless entity, all of which were cast away from the Light of the Pleroma to become hypostasized into the lower Sophia, or the Mother of error, creator of the material universe. The *Gospel of Truth* bears testimony to such a tradition, as 17. 10-20 recalls:

> ignorance of the Father brought
> about anguish and terror; and the
> anguish grew solid like fog, so that
> no one was able to see. For
> this reason error became powerful;
> it worked on its own matter fool-
> ishly, not having known the truth.
> It set about with creation, prepar-
> ing with power and beauty the sub-
> stitute for the truth. (Robinson 40)

Humans, though, were still endued with a spark of divinity (Armstrong 96). And, it was to this attribute that a certain Christos was sent by the Pleroma to enlighten

through knowledge. The path of salvation from ignorance imparted by error through this *gnosis* is also evidenced within the *Gospel of Truth*.

The authorship of this particular document is commonly attributed to Valentinus, founder of the Valentinian school of Gnostic thought. Before moving to Rome, where he eventually taught, between the years of 135 and 160 A.D., Valentinus was born in Egypt and studied in the city of Alexandria. Concerning vestiges of a Judeo-Christian heritage contained within this Valentinian school and expressed within the *Gospel of Truth*, it is believed that "Valentinus built upon the religious foundations already laid" (Grant 128). More specifically, aspects of Hebrew thought and the Jewish Wisdom tradition appear to be reflected within the *Gospel of Truth*. Like many of the other Near Eastern Wisdom traditions within their midst, the Wisdom of Israel possessed a certain timeless quality in its quest for the meaning of life in context to the individual human being. This came to be expressed within a specific type of Wisdom literature; the Hebrew Bible contains such material in the books of Proverbs, Ecclesiastes, and Job (Anderson 570). Frequently, the Wisdom of Solomon and Sirach are also counted amongst such Hebrew genre. However, in the *Gospel of Truth*, material thought to have been derived from Israelian Wisdom sources is presented in such a way as to either reinterpret their contents within Valentinian-Gnostic terms, or to more simply denigrate the Creator God of the Tanakh. Broadly speaking, the creator of this world is dubbed "error" in the *Gospel of Truth*, immediately evoking a negative connotation of the Lord, traditionally portrayed as the Creator of the world in the Genesis account. Further links between the Creator God of the Old Testament and error are to be found within their common working conditions. Genesis 1:2 recalls that the "earth was without form and void, and darkness was upon the face of the deep" (Revised Standard Version, Catholic Edition). Similarly, error initially operates within darkness and, according to the translation of Hans Jonas, " 'It [error] elaborated its own matter into the Void' " (183). While there is no detailed account of creation within the *Gospel of Truth*, it is implied that what was created by error was tainted with the blight of his own ignorance and limited abilities. This earth was surely the ideal prison for the humans with whom he had grown hostile. Yet, in Genesis 1:31, one finds another description of a Creator: "God saw everything that he had made, and behold, it was very good" (RSV, Cat. ed.).

According to the Hebrew tradition, Wisdom is personified, especially as recorded in Proverbs 1-9 and Job 20:9 (Fiorenza 27). She is indeed perceived to be both pre-existent and active in the creation of the world and man. Proverbs 8:22-23 recounts: "The Lord created me [Wisdom] at the beginning of his work, the first of his acts of old. Ages ago I was set up...before the beginning of the earth" (RSV, Cat. ed.). Originally, the intermediary between the Creator God and the world was understood to be Wisdom, as described above. Later, within the influence of Greek philosophy, Philo of Alexandria further developed this concept in terms of the Jewish Logos. Combined aspects of the Jewish-Wisdom-Logos tra-

dition are observed within the first chapter of the Gospel of Saint John, contained within the New Testament. Verse one begins: "In the beginning was the Word, and the Word was with God" (RSV, Cat. ed.). While elements following in this same passage from St. John are regarded as anti-Gnostic composures by some, it was noted by R. McL. Wilson that this "Fourth Gospel was a favourite book at least among the Valentinians" (194).

A paradox has been recognized within the Valentinian myth of creation, in that it was Sophia, or Wisdom, who begot the supposedly ignorant and destructive Demiurge, who formed this flawed material world (Jonas 176). Moreover, the actual fall of Sophia, through whom the earth was inadvertently derived, parallels the Fall of Man in the Garden of Eden. God's injunction of Genesis 2:16-17, " 'You [Adam and Eve] may freely eat of every tree of the Garden; but of the tree of knowledge of good and evil you shall not eat, for in that day that you eat of it you shall surely die,' " (RSV, Cat. ed.) was blatantly disregarded. Thereby various curses were inflicted upon the human race for this disobedience. While the Fall of Adam was not a necessary precursor to the creation of the earth, it is indeed noteworthy that the end result was that of terror, anguish, and grief for a pursuit of the incomprehensible God, as in the tale of Sophia. Also, it is significant that Adam is punished severely for his desire to possess knowledge. According to Gnostic thought, this knowledge would have awakened him to the true reality of the Creator God, fathoms below the Fore-Father over the Pleroma. Never could this be permitted.

Within that context, but slightly more Christian terms, the *Gospel of Truth* 18. 23-31 states:

> He [Christos] was nailed to a tree (and) he became a fruit of the knowledge of the Father. It did not, however, cause destruction because it was eaten, but to those who ate it it gave (cause) to become glad in the discovery. (Robinson, 41)

This certainly illustrates the overlaying of various traditions within Gnostic thought, and with regard to Judaism can be seen as a "revolutionary reversal" of Old Testament values (Conzelmann 268). However, some have claimed that the involved narrative contained within the *Gospel of Truth* concerning the name of the Father is derived from Jewish speculation upon the divine name of the Lord and Creator depicted within the Tanakh (Wilson 163). In the same fashion as the divine Hebrew name, the *Gospel of Truth* 38. 16-22 tells that the name of the Father "is invisible because it alone is the mystery of the invisible...the Father's name is not spoken" (Robinson 49). If developed from only this perspective, one could conceive that Valentinus is for once linking the pre-existent Father with the Hebrew God of the Old Testament. However, this is not the case when taken within the entire surrounding context. Rather, the reference to this hidden name more so correlates to a passage from Philippians 2:9 in which "God...bestowed on him [Christ] the name which is above every name" (RSV, Cat. ed.). Taken with this understanding, one can again notice the preeminence of Christos, his death, and affiliation with the Fore-Father, as fully pre-

sented within the *Truth* Gospel (Grant 145).

One thing valued in both the Wisdom of Solomon and Sirach was death as the limit of life. The Wisdom of Solomon, in particular, envisioned a life enriched through wisdom, extended to an immortality beyond one's earthly life. Through this, the Jewish Wisdom tradition sought a meaningful order to reality (Collins 192). Recalling that all that is material was derived within terror and other sufferings of Sophia, Gnostics believed that "the fear of death and dissolution, are located...in the body" (Pagels 144). Thus, their ardent desire was to transcend the material--or their own bodies-- through knowledge, avoiding the limiting consequences of mortal constraints. But, in order to accomplish this, the Gnostics looked inwardly to find these truths. The passage from the *Gospel of Truth*, quoted above, concluded, "and they discovered him [Christos] in themselves" (Robinson 41). Similarly, the Jewish Wisdom tradition focused primarily upon the individual human being, rather than peoples or societies (Anderson 569). With that in mind, one can appreciate the ease with which the Gnostic could readily shape and mold portions of this Wisdom tradition into their own.

Interestingly, Gnostics were often able to denigrate the Creator God of Israel within the customary terminology of Israelian Wisdom and other Hebrew literature. As mentioned before, within Gnostic systems, error is perceived as one who "became powerful . . . foolishly, not having known the truth . . . set about with a creation, preparing with power and beauty the substitute for the truth" (Robinson 40). The creator of this world can, thus, be viewed as one who is both arrogant and prideful, as the antithesis of knowledge. Arrogance and pride are also attributes of Lady Folly, depicted in Hebrew Wisdom literature, as she attempts to lead the unwary astray; according to Proverbs 8:13b, "Pride and arrogance . . . I [Wisdom personified] hate" (RSV, Cat. ed.) Also, within Gnostic myths, the creator, error, is sometimes referred to as Samael or Saklas. In Aramaic, Samael is derived from the word for blind, while Saklas clearly stems from the word *sakla* or fool. Both being blind and a fool are characteristics of those who have forgotten their origins. Deuteronomy 32:6-18 states: "Do you requite the Lord, you foolish and senseless people...You were unmindful of the Rock that begot you, and you forgot the God who gave you birth" (RSV. Cat. ed.). No doubt, the *Gospel of Truth* would regard the creator named error to be foolish, but further one can see that error is blinded as "it fell into a fog" (Robinson 40). Arrogance, pride, blindness, and foolishness are certainly not attributes of the Creator God of Israel as traditionally held by orthodox Jews and Christians (Fischer-Mueller 81-82). However, they are indeed the attributes of the creator in such Gnostic writings as the *Gospel of Truth*. Specifically, within the Ten Commandments, it is said "I the Lord your God am a jealous God," according to one record in Deuteronomy 5:8 (RSV, Cat. ed.). It was held that the God of Israel was the only Deity to be worshipped within the traditionally monotheistic religion of Judaism. No gods should be hailed before the Lord. Yet, such an attitude would have been expected

according to the Gnostic's perspective of error, who had forgotten his ancestry and station below the Fore-Father. In contrast, the *Gospel of Truth* notes that "the Father was not jealous"(Robinson 41).

Valentinus persists in portraying the creator in such a negative fashion, attempting to present the truth from the untainted Gnostic perspective. Truly, the reapplication of various religious traditions, especially Judaism, illustrates Valentinus' penchant for interweaving his work and thought with allegory. Already, one can observe the subtle way in which he has integrated allusions to foundational Gnostic myths into a cohesive whole within the *Gospel of Truth*. It can also be seen that Valentinus expounded upon New Testament ideas and terminology and transposed them into a Gnostic key (Wilson 162). Certainly, this would be true of the Jewish material contained within the *Gospel of Truth*. Reference to this is found in Ptolemaus' *Letter to Flora* in which he attempts to persuade a Christian woman, or church, that in Valentinianism she can find the true explanation of the inconsistencies of the Old Testament (Grant 139). Here, it is explicitly pointed out that the Mosaic Law is not from the Father, but from a god of justice, the creator (Jonas 192).

Various elucidations have already been evidenced in a variety of portions derived from specific elements of Hebrew writings. But, more broadly speaking, Gnostic reinterpretations delve even further into the realm of doctrines, such as that of conversion. Especially manifested within Valentinian Gnosticism was the somewhat contradictory conviction that, while all humans were believed to possess a divine spark, only a select few would be able to successfully experience salvation brought through a conversion to *gnosis*. As developed within the Valentinian school, there were three classes of individuals: the hylic, who are destined only to perish; the psychic, who enjoy the freedom to pursue either a path of knowledge or not; and, the pneumatic, who have been elected to full salvation (Wilson 208). Within the *Gospel of Truth*, one finds an emphasis on turning from one thing to another, from drunkenness to sobriety (22.17-20) and from sleep to wakefulness (29.32-27). Metaphorically, these can be applied to the overriding concept of turning away from ignorance to knowledge. This was the essential conversion experience for the Gnostic: not putting aside a past life of sinfulness and replacing it with one of aspiring piety, as one would discover in Judeo-Christian systems (McGuire 344). The lack of a developed moral code provided lasting effects upon the Gnostics and their subsequent perceptions of the society in which they operated. Some Valentinians were so arrogant as to contend that "they were unharmed by what they did, just as gold is unharmed by mud" (Grant 138). Indeed, it was believed that not only should one not be burdened with obedience to laws imposed by the God of Israel, synonymous with error, but one should actively commit blatant acts, such as adultery, in order to destroy the commandments (Grant 95).

This is certainly in agreement with the work of Hans Jonas, who insisted that the Gnostics were ultimately devoted to the self-knowledge which issues from freedom

and that their mythology developed as an aspect of this desire for "freedom from...the God of the Old Testament, from Old Testament law or any law" (Grant 12). One possible explanation for the inclusion of negative jargon concerning the God of Israel emanates from this point. Commenting on Rudolph Bultmann's idea that within this Gospel, Jews represent the world in hostility to God, Niels Dahl adds, with equal import, that the Jews should be understood to symbolize the world (Ashton 68). It must be remembered that Gnostics despised the world with her restraints and blemished heritage; therefore, polemics against the Hebrew God of the Tanakh can be taken as both oppositions to specific Jewish traditions, as well as tools to explain, in terms readily comprehended by those who already equated Jews as representative of the world, their revulsion for the material realm.

Truly, the employment of standard Jewish material, which very probably did not adequately reflect the entire corpus of current Jewish thought, would have easily intermeshed with the popular conceptions of the Jew, as stereotypically depicted within society. The language of" 'theological anti-Semitism,' " to be later developed by such figures as Origen in the third century, was not something entirely alien (Poliakov 23). Indeed, there was a strong emphasis upon anti-Semitism following the Second Jewish War, or the Bar Kocheba Rebellion, during the years of 131-135 A.D. Agitated by the Roman Emperor Hadrian, an ardent proponent of Hellenistic culture, who banned the Jewish covenant rite of circumcision, the Jewish people were led into open insurrection by the dynamic leader, Simon bar Kosiba (Grant 248). Conzelmann notes the import of this rebellion in terms of the relationship between the Jews and their Roman rulers and the subsequent developments within Judaism itself. (35).

While it is debatable whether or not Marcion of Sinope was a Gnostic, it cannot be denied that he was a prime example of the anti-Semitism resulting from the impositions of Hadrian and the violent Jewish reactions. Derived from its repudiation of an evil material world, Marcion believed that its creator must either be ignorant or evil. The God depicted within the Old Testament as a justice-oriented, punishing Deity and Creator could not have been the same as the loving God and Father of Jesus Christ, as found in the New Testament (Gonzalez 61). Therefore, in light of this belief, combined with a strong association with prevalent anti-Semitism, Marcion strove to "dissociate Christianity...from Judaism in general" (Grant 122).

Given this example from Marcion, it is not entirely improbable that Valentinus, who also operated within Rome during this particular time, could have followed a similar route within the projection of his own Gnostic faith. Although material derived from Hebrew sources remains within the *Gospel of Truth*, it is presented in a reinterpreted manner which serves both to refute traditionally accepted tenets of the orthodox Judeo-Christian religion, while at the same time promoting Valentinian Gnostic thought through this same vehicle. This particular pattern was characteristic of Gnosticism in general, as it has been reiterated that, as a group, they "had evolved a kind of metaphysical anti-Semitism by distinguishing the

Hidden God of Jesus Christ from the cruel God of the Jews, who was responsible for the creation of the world" (Armstrong 330).

Certainly, Gnostic thought holds this Creator God in less regard than the serpent within the Garden of Eden, as again seen in this mutinous reversal of Old Testament values (Conzelmann 268). It is not entirely inconceivable that one possible explanation for this behavior lies within a term that the Gnostics frequently used to refer to themselves, "the undominated race," as found in such other writings as the *Sophia of Jesus Christ* and the *Letter of Eugnostos*. This particular term has been employed within classic Greco-Roman literature to denote a lack of having a king, or to indicate a lack of subjection to a king. Gnostics considered themselves enlightened through their possession of knowledge, and thus deemed themselves more fully engrafted to the divine nature (Fallon 288). Already, they commanded a disdain for this material world and for its Creator. Therefore, as the "undominated race," no other conclusion could have possibly been reached than not to follow these ancient Jewish laws. Indeed, a power at least this strong must have been at work within the Gnostic mind to produce such purposely constructed texts as those of the Nag Hammadi scrolls.

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Male-Dominated Leisure and the Incidence of Marital Disruption: The Case of Freshwater Fishing in Alabama

by Guy C. Dalto

The data for this study was made available by the Alabama Department of Fish and Wildlife. They do not bear any responsibility for the analysis and interpretation presented here.

Abstract

Previous research has found that marital disruption is a function of family composition. Families with only sons are less likely to be divorced than families with only daughters. The reason for this is due to the tendency of fathers to interact and play with sons more than daughters. This paper hypothesizes that fathers are more likely to play with sons when they have been raised in a culture where male-dominated, leisure activities are the norm. When they become parents, such males are motivated to participate in male-dominated leisure activities. They also have the requisite skills necessary to feel confident in taking their families with them. The data for this analysis come from a random sample of Alabama residents. I use freshwater fishing behavior as an indicator of preferences for male-dominated leisure. The results show that the effect of having sons and daughters on marital disruption is a function of fishing behavior. Families that freshwater fished were more likely to be divorced when only daughters were present. However, for families that did not fish, divorce was more likely if they had only sons.

Introduction

For much of human history, people lived in extended families while foraging for food. Men typically hunted large game animals and large aquatic fauna while women hunted small animals and gathered edible fruits, nuts, and tubers (Murdock and Provost 1973). These skills were passed down from men to boys and from mothers to daughters (West and Konner 1976). In modern societies, commercial fishing has become

even more male-dominated (Bradley 1989). For most people, however, these consumptive activities are usually done for leisure, not survival. In 1991, 40 million adult Americans went hunting and/or fishing: 26 million fished; 4 million hunted; and 10 million did both. An even greater number (76 million) enjoyed nature through non-consumptive activities like bird watching, visiting zoos, and taking pictures. Though leisure, consumptive activities are not the sole province of men, they too remain male-dominated, ones in which skills are primarily transmitted between fathers and sons. Over 90% of all hunters and almost three quarters of all anglers are men (Crispell 1994). In modern societies, these consumptive activities are related to family integration. The adage "the family that plays together stays together" implies that there is a correlation between marital satisfaction and time spent enjoying nature. Indeed, Hill (1988) finds that spending time in recreational activities like bowling, swimming, skating, and fishing reduces the incidence of divorce. However, the fact that consumptive leisure activities are male-dominated have implications on family interaction and the incidence of marital disruption. This is because fathers who prefer male-dominated leisure activities are less likely to interact with their families if only daughters are present. The lack of family integration means less marital satisfaction for husbands. This male-dominated subculture increases the risk of marital disruption when only daughters are present. A survey of the leisure activities of Alabama residents described in the next section is used to evaluate this hypothesis.

Review of the Literature

The correlation between having sons, daughters, and marital disruption is well established. After controlling for various demographic factors, Morgan et al. (1988) find that U.S. families with only one daughter were nine percent more likely to experience marital disruption than families with only one son. This difference increased to eighteen percent when families with two daughters were compared to families with two sons. Since poverty is related to divorce, separation, and desertion, this means that female children are more likely to grow up in a single parent, welfare family. It is argued that parental differences in attachment to children is one cause of this pattern of marital disruption. Both parents tend to spend more time with the children when they are infants though mothers spend more time as caretakers and fathers spend more time in play. One important gender difference is that fathers spend more time playing with sons than with daughters (Lamb 1976, 1986), a relationship that extends into adolescence. Another difference is that females who grow up without brothers are less likely to engage in leisure activities considered more masculine, like playing physically demanding games (Colley 1996). The increased risk of marital disruption when only female children are present also occurs throughout the stages of child development (Morgan et al. 1988). Of course, not all fathers spend more time with their sons than daughters. Paternal involvement with children is a function of motivation, skills, social support, and external constraints (Lamb 1986). Fathers prefer having sons and play with them more than

daughters when the leisure activities fathers prefer are male-dominated. Fathers are also motivated to play with sons if they possess the skills required to fish and hunt. Possessing such skills gives fathers the confidence they need to take their family on trips without appearing amateurish. Social support and encouragement is also a factor, especially the support and encouragement of the man's wife to either go with him or not object to such leisure activities. Finally, external constraints include job related barriers (excessive hours worked), residential barriers (absence of places to play), and resources (equipment and lodging). These pattern preferences for male-dominated activities can be considered a subculture or way of life where motivations, skills, and resources are differentially transmitted between fathers and sons.

Data and Variables

The data for this analysis come from a random sample of residents of the State of Alabama conducted by the Alabama Department of Fish and Wildlife in 1995. The primary concern of the survey was to determine the freshwater fishing behavior of Alabama residents. The sample is weighted by the sex of respondent to equal the proportion male and female in the population. The total sample size is N=1200. There is considerable variation by state in fishing/ hunting behavior. Alaska and Wyoming rank at the top in the percent of their populations who fish and/or hunt (41%) while Rhode Island, California, and Massachusetts rank at the bottom (13%). This is due to differences in urbanization in that a larger percent of rural residents engage in the activities (23%) compared to urban dwellers (14%). Alabama ranks in the middle with regard to consumptive activities with 24% of population having fished or hunted. This is quite close to the national average of states (21%). Alabama is also at the national average of 40% of residents who participate in non-consumptive activities (National Survey of Fishing, Hunting, and Wildlife 1991). Though typical in terms of the extent of fishing behavior, generalizing the findings of this study beyond the State of Alabama must be done with considerable caution.

The definition of the variables is presented in table 1. These variables represent non-consumptive and consumptive behavior, skill acquisition, social support, marital disruption, and the sex of children. As table 1 shows, many questions about respondent's consumptive and non-consumptive behavior were asked. Most took the form "Have you ever..." rather than "What do you do for leisure?" Only in the case of freshwater fishing did the survey ask respondents if they actually fished last year. For those who said that they had freshwater fished, the mean days fished was 25.8. The range was substantial (from 1 to 365 days) and skewed to the right. The modal value was just 5 days fished. This behavioral variable is used as an indicator of preferences for male-dominated consumptive leisure activities. Male and female respondents who said that they freshwater fished last year were defined as belonging to families who preferred this male-dominated, consumptive leisure activity. This variable is used to test the hypothesis that marital disruption is greater among families with only daughters when

they prefer fishing over other non-consumptive, gender-neutral, activities.

Data Analysis
Sex differences in Leisure

Table 2 shows gender differences in leisure activities. The results show that traditional consumptive activities are male-dominated. Males are 50% more likely to have ever gone hunting, 25% more likely to have ever gone fishing (in fresh and saltwater), and 12.5% more likely to have ever gone trapping. Last year, males were 29.1% more likely to have actually gone freshwater fishing last year than females. Activities oriented to skill acquisition are also male-dominated. Males are 34.3% more likely to have ever gone pistol shooting and 21.8% more likely to have ever gone archery shooting than females.

Non-consumptive activities are male-dominated though not as strong as consumptive activities. Males are more likely to have ever gone canoeing, camping, boating, backpacking, hiking, jogging, and to have owned an aquarium. But there is no gender difference in having ever gone bird watching, photographing nature, or having ever gone to the zoo. Among married couples, there is considerable difference in the fishing behavior of spouses. Males say that 37% of their wives fish while females say that 63.4% of their husbands fish. These percentages are due to the fact that married men are more likely to fish by themselves or go fishing with friends. Overall though, males and females do not differ in their opinion that their families enjoy nature.

Freshwater Fishing as an Indicator of Male-dominated Leisure

In this paper, freshwater fishing activity is used as an indicator of preference for male-dominated leisure. As we just saw in table 2, freshwater fishing is just one of many male-dominated activities oriented to nature. Table 3 shows that freshwater fishing is correlated with many of these male dominated consumptive and non-consumptive leisure activities. Males who freshwater fished last year were 22.9% more likely to have ever salt water fished, 21.9% more likely to have ever hunted, and 9.6% more likely to have ever trapped. Males who freshwater fished were also 28.3% more likely to have gone pistol shooting and 16.4% more likely to have gone archery shooting. The percentage differences for females are quite similar.

Except for owning an aquarium, males and females who freshwater fished last year were also more likely to engage in non-consumptive leisure activities. This included going camping, canoeing, boating, backpacking, hiking, jogging, and bird watching. These correlations support my contention that current fishing behavior is a valid indicator of preferences for male dominated, leisure activities.

The Transmission of Motivations to Fish and Skills

We have just seen that freshwater fishing behavior is correlated more broadly with participation in other male-dominated, leisure activities. These motivations and skills are socially transmitted between parents and children. Tables 4a and 4b show the correlations between current freshwater fishing

behavior and whether or not a person's parents ever freshwater fished. Males whose parents had freshwater fished while they were growing up were 25.8% more likely to have freshwater fished last year. Females were 41.4% more likely to have freshwater fished if their parents fished.

With respect to comparative skill ability, males whose parents fished were 21.7% more likely to rate their fishing skills as being as good or better than others. However for females, those whose parents fished were only 8.2% more likely to rate their skills as being as good or better than others. These differences might reflect the male-dominance of fishing in that daughters are less likely to learn fishing skills than sons if their parents fished. In fact, females are 10.8% less than males to say that their parents fished at all. This could be due to the fact that fathers are less likely to fish or take their children fishing if they have daughters. In the final section, I examine the relationship between fishing behavior, sons, daughters, and marital disruption.

Tables 6a and 6b show the relationship between having only sons and daughters and marital disruption for those who did not (table 6a) and those who did (table 6b) freshwater fish. The relationship is clearly specified by fishing behavior. For those families who prefer male-dominated types of leisure activities, having only daughters is expected to generate differing patterns of interactions than those families that have only sons. Fathers may not feel it appropriate to take daughters with them when they engage in male-dominated activities. On the other hand, it would be unfair at this point to single out fathers as the only

factor in what should be thought of as a family system. Daughters raised without brothers are more likely to grow up preferring gender appropriate playtime activities. This could make mothers who have only daughters less likely to participate with their husbands in male-dominated leisure activities. In any case, the results show that for those families that fished last year, those with only sons were 9.2% less likely to be divorced or separated compared to families that had only daughters (p=.067). On the other hand, families that did not fish last year did not show a male preference when it came to marital stability. In fact, families that had only daughters were 15.5% more likely to be intact compared to families who had only sons (p=.076).

These differences are also consistent with the parents judgements about their family's attitude toward nature. Among those who fished last year, parents with only sons were 10.6% more likely to say that their families enjoyed nature than if they had daughters only. On the other hand, among those who did not fish last year, parents with only daughters were 11.2% more likely to say that their families enjoyed nature. This latter percentage difference makes sense if by 'enjoyed nature' parents meant enjoyed more gender-neutral, non-consumptive leisure activities such as going to the zoo, bird watching, or photographing nature.

Discussion

Male preference has been shown to be one reason for the greater incidence of marital disruption in families that have only daughters. Time spent with family in recreation has also been shown to increase marital sat-

isfaction and marital stability. In this paper, it was argued that having only daughters reduces marital satisfaction when family recreation is spent in male-dominated leisure activities. Using a random sample of Alabama residents, the results showed that families who fished for leisure were 9.2% more likely to experience marital disruption when only daughters were present. Several cautionary notes are necessary. One deals with the generalizabiliity of the study to States other than Alabama. If yes, then all other things being equal, we would expect that States like Alaska and Montana would have a higher ratio of divorced families with female-only to male-only children. Another problem comes from the small sample size. Only 81 respondents did not fish last year and had male-only or female-only children. Only 151 respondents fished last year and had male-only or female-only children. This did not allow for the inclusion of other control variables correlated with fishing behavior (e.g. age, townsize, education, and income). As such, future research would benefit from larger sampling frames and the inclusion of leisure preferences directed at not only parents but children as well.

Table 1: Definition of Variables
NON-CONSUMPTIVE BEHAVIOR-10 variables
Have You Ever Gone: Camping, Canoeing, Boating/Sailing, Backpacking, Hiking Jogging, Bird Watching/Photographing, To the Zoo, Own an Aquarium..............
Yes=1, No=0
CONSUMPTIVE BEHAVIOR-5 variables
Have You Ever Gone: Freshwater Fishing, Saltwater Fishing, Hunting, Trapping.....
Yes=1, No=0
Did You Freshwater Fish Last Year.........
Yes=1, No=0
SKILL ACQUISITION-2 variables
Have You Ever Gone: Pistol Shooting, Archery Shooting.........................
Yes=1, No=0
SOCIAL SUPPORT-2 variables
Does Your Spouse Freshwater Fish...........
Yes=1, No=0
Family Doesn't Enjoy Nature..............
Strongly Agree Thru Strongly Disagree=5
MARITAL DISRUPTION.........................
Divorce or Separate=1, Married=0
SEX OF CHILDREN.............................
1=males only,
2=females only

Table 2: Consumptive and Non-Consumptive Leisure, Skill Acquisition and Social Support by Sex

Type of Activity	Percent Male (n=599)	Female (n=601)	Percent Difference
Non-Consumptive			
Have You Ever Gone			
Camping	77.7	62.4	15.3***
Canoeing	44.1	25.8	18.3***
Boating/Sailing	83.0	72.4	10.6***
Backpacking	32.6	11.6	21.0***
Hiking	74.4	64.4	10.0***
Jogging	70.4	64.6	5.8**
Bird Watching/ Photographing	39.8	38.3	1.5
To a Zoo	89.2	92.2	-3.0
Own an Aquarium	79.4	72.5	6.9**

Consumptive
  Have You Ever Gone
Freshwater Fishing 87.5 62.1 25.4***
Saltwater Fishing 58.9 34.1 24.8***
Hunting   78.7 28.0 50.7***
Trapping   15.3   2.8 12.5***
Did You Freshwater
  Fish Last Year   70.7 41.6 29.1***

Skill Acquisition
Have You Ever Gone
Pistol Shooting   68.7 34.4 34.3***
Archery Shooting   38.1 16.3 21.8***

Social Support
Does Spouse Fish   37.0 63.4 -26.4***
                 (n=398) (n=365)
Does Family Enjoy
    Nature   24.6 21.1   3.5

Consumptive
  Have You Ever Gone
Freshwater Fishing 42.7*** 65.0***
Saltwater Fishing   22.9*** 25.8***
Hunting   21.9*** 24.7***
Trapping   9.6**   2.0

Skill Acquisition
  Have You Ever Gone
Pistol Shooting   28.3*** 26.0***
Archery Shooting   16.4**   9.1**

Social Support

Does Spouse Fish   29.0*** 42.6***
                  (n=398) (n=365)
Does Family Enjoy
    Nature   11.0*   15.3**

Table 3: Relationship Between Freshwater Fishing Behavior, Non-Consumptive, Consumptive, Skills, and Support by Sex.

Type of Activity	Percent Difference	
	Male (n=599)	Female (n=601)
Non-Consumptive		
Have You Ever Gone		
Camping	22.9***	26.0***
Canoeing	16.4***	9.3*
Boating/Sailing	21.9***	28.1***
Backpacking	6.2	10.2***
Hiking	26.7***	26.0***
Jogging	11.4**	14.8***
Bird Watching/ Photography	10.4*	21.5***
To A Zoo	11.4***	3.8
Own an Aquarium	-15.8***	-13.9***

TABLE 4A: Fished Last Year by Did Parents Freshwater Fish
   Controlling for Sex = males only

Count Col Pct	Did Parents Ever Fish			
	No	Yes		
			Row	Percent
	.00	1.00	Total	Difference
Fished				
Last .00	87	89	176	
Year 47.2	21.4	29.3		-25.8
1.00	98	326	423	
52.8	78.6	70.7		+25.8
Column	185	414	599	
Total	30.8	69.2	100.0	

Chi-Square

	Value	DF	Significance
Pearson	40.9	1	.001

Statistic	Value	ASE1	T-value
Gamma	.533	.068	6.02

TABLE 4B: Fished Last Year by Did Parents Freshwater Fish
Controlling for Sex = females only

Did Parents Ever Fish

Count Col Pct	No .00	Yes 1.00	Total	Row Percent Difference
Fished Last Year	.00 206 82.4	145 41.3	351 58.4	-41.4
	1.00 44 17.6	206 58.7	250 41.6	+41.1
Column	250	351	601	
Total	41.6	58.4	100.0	

Chi-Square

	Value	DF	Significance
Pearson	101.5	1	.001

Statistic	Value	ASE1	T-value
Gamma	.739	.045	11.38

TABLE 5A: Comparative fishing ability by Did Parents freshwater fish Controlling for Sex = males only

Did Parents Ever Fish

Count Col Pct	no .00	yes 1.00	Total	Row Percent Difference
Fishing Ability	1.00 90 65.2	167 43.5	257 49.3	-21.7
less skilled				
as or more skilled	2.00 48 34.8	216 56.5	264 50.7	+21.7
Column	138	383	521	
Total	26.5	73.5	100.0	

Chi-Square

	Value	DF	Significance
Pearson	19.08	1	.001

Statistic	Value	ASE1	T-value
Gamma	.417	.085	4.44

TABLE 5B: Comparative fishing ability by Did Parents freshwater fish Controlling for Sex = females only

Did Parents Ever Fish

Count Col Pct	No .00	Yes 1.00	Total	Row Percent Difference
Fishing Ability	1.00 81 85.3	209 77.1	290 79.2	-8.2
less skilled				
	2.00 14	62	76	

as or more   14.7 | 22.9 | 20.8| +8.2
skilled   +————————————+
    Column   95   271   366
    Total   26.0 74.0   100.0

Chi-Square

	Value	DF	Significance
	-----	----	------------
Pearson	2.83	1	.092

Statistic	Value	ASE1	T-value
	-----	---------	--------
Gamma	.264	.151	1.82

Table 6a Marital status by Sex of Children
Controlling for fishing behavior = did not
fish last year

                Sex of Children
    Count |
    Col Pct | Males   Females
            | Row   Percent
Marital | 1.00| 2.00| Total Difference
Status   ————————+————————+————————
            1.00 | 28 | 38 | 66
married   72.7 | 88.2 | 80.9 | 15.5
            +————————+————————|
            2.00 | 11 | 5 | 16
divorced   27.3 | 11.8 | 19.1 |-15.5
            +————————————————+
    Column   39   43   81
    Total   47.5 52.5 100.0

            Chi-Square

	Value	DF	Significance
	-----------	----	------------
Pearson	3.14	1	.076

Statistic	Value	ASE1	T-value
	-----	----	-------
Gamma	-.475	.231	-1.78

Table 6b Marital status by sex of children
controlling for fishing behavior = did fish
last year

                Sex of Children
    Count |
    Col Pct |Males   Females
            | Row   Percent
Marital | 1.00| 2.00| Total Difference
Status   ————————+————————+————————
            1.00 | 64 | 72 | 135
married   94.8 |85.6 | 89.7 | 9.2
            +————————+————————|
            2.00 | 4 | 12 | 16
divorced   5.2 | 14.4 | 10.3 | -9.2
            +————————————————+
    Column   67   84   151
    Total   44.5 55.5 100.0

            Chi-Square

	Value	DF	Significance
	-----------	----	------------
Pearson	3.36686	1	.067

	Value	ASE1	T-value
	-----	----	-------
Gamma	.506	.235	1.94

Table 7a: Family doesn't enjoy nature by sex of children controlling for fishing behavior=did not fish last year

```
              Sex of Children
   Count  |
   Col Pct |Males   Females
Family    |                Row    Percent
Enjoys    | 1.00|  2.00| Total  Difference
Nature    ------+------+------|
          1.00 |  27  |  25  |  51
other     68.8 | 57.6 | 63.0 | -11.2
          +----------+------|
          2.00 |  12  |  18  |  30
strongly
disagree  31.2 | 42.4 | 37.0 | +11.2
          +-----------------+
   Column    39      43      81
   Total    47.5    52.5   100.0
```

Chi-Square	Value	DF	Significance
Pearson	1.08	1	.298

Statistic	Value	ASE1	T-value
Gamma	.23735	.22002	1.05124

Table 7b: Family doesn't enjoy nature by sex of children controlling for fishing behavior=fished last year

```
              Sex of Children
   Count  |
   Col Pct |Males  Females
Family    |                Row    Percent
Enjoys    | 1.00|  2.00| Total  Difference
Nature    ------+------+------|
          1.00 |  27  |  43  |  70
other     40.3 | 50.9 | 46.2 | +10.6
          +-----------+------|
          2.00 |  40  |  41  |  81
strongly
disagree | 59.7 | 49.1 | 53.8   -10.6
          +-----------------+
   Column    67      84      151
   Total    44.5    55.5    100.0
```

Chi-Square	Value	DF	Significance
Pearson	1.68	1	.195

Statistic	Value	ASE1	T-value
Gamma	-.211	.158	-1.31

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